

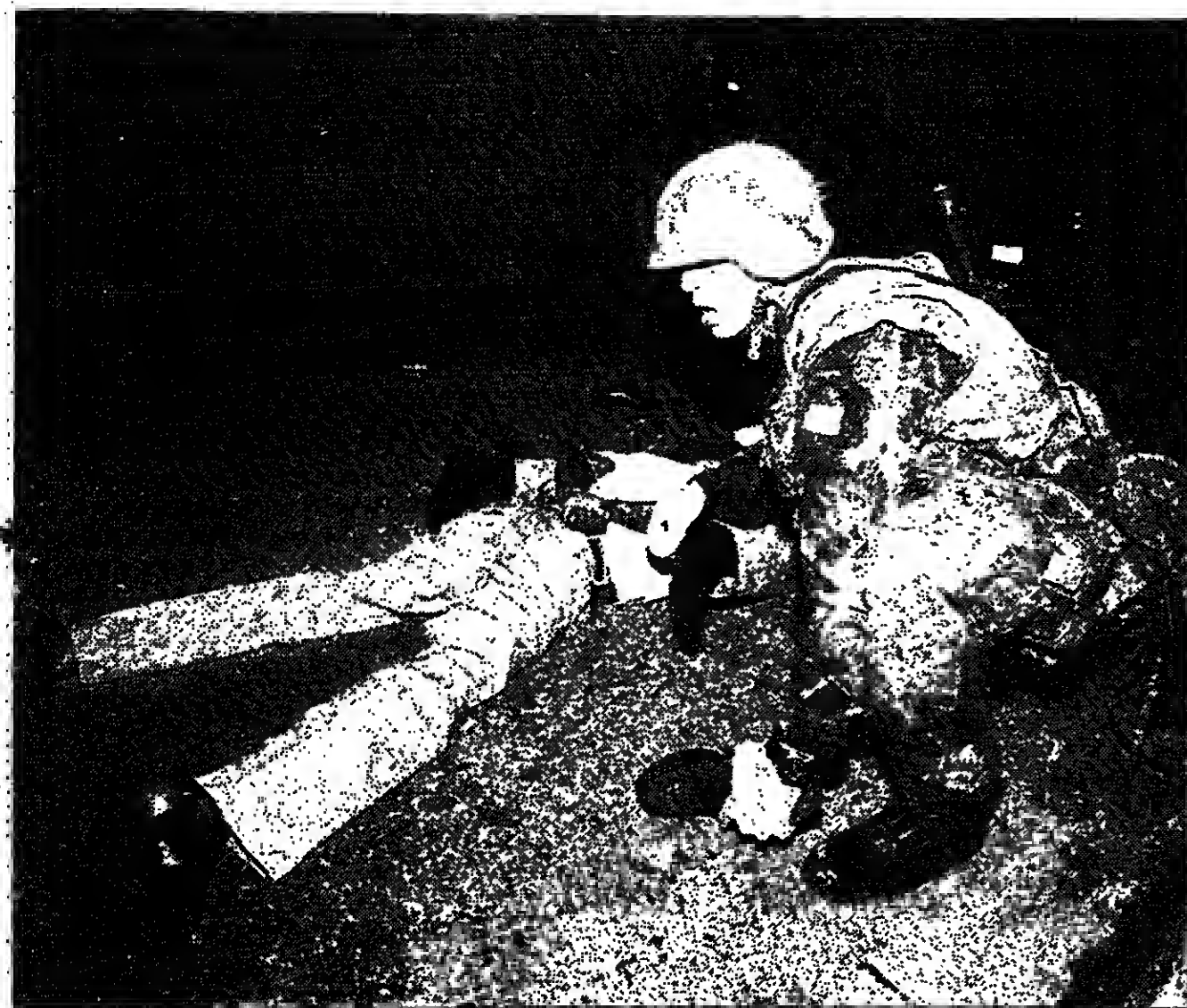
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# Herald INTERNATIONAL Tribune

PUBLISHED WITH THE NEW YORK TIMES AND THE WASHINGTON POST

Paris, Monday, September 26, 1994

No. 34,703



A U.S. Marine apprehending Haitians after the gunbattle outside the police station in Cap-Haïtien.

## Chaos in Haitian City After Marines Kill 10

Compiled by Our Staff From Dispatches

**CAP-HAÏTIEN, Haiti** — Policemen and soldiers abandoned their posts on Sunday as the junta's authority collapsed in Haiti's second-largest city only hours after 10 Haitians identified as military policemen were killed in a confrontation with U.S. Marines.

The Haitian military leader, Lieutenant General Raoul Cédras, accused U.S. troops in Haiti of atrocities Sunday.

"Cédras accused us of atrocities and demanded my transfer and court-martial," Colonel Tom Jones of the U.S. Marines told reporters in this northern coastal city after a visit by General Cédras and Lieutenant General Hugh Shelton, commander of the U.S. forces in Haiti.

Colonel Jones said Sunday that U.S. troops had fired first in the shootout at the police headquarters in Cap-Haïtien.

Word of the Haitian police and soldiers' departure spread quickly to the streets, bringing hundreds of Haitians out to trash the property of those who had ruled over them. The crowd carried off beds, mattresses, tables, desks, electric fans and stacks of papers. People also showed off identification cards left behind by the police and their dreaded civilian auxiliaries known as "attachés."

In Washington, the exiled Haitian president, the Reverend Jean-Bertrand Aristide, announced Sunday that the Haitian Parliament would convene Wednesday to consider granting an amnesty to the military units that deposed him three years ago.

To accelerate the "process of full restoration of constitutional order," a parliamentary session has been scheduled to study a draft of the amnesty law, Father Aristide said in a statement sent to news organizations.

The firefight outside a Cap-Haïtien police station on Saturday night was the first deadly clash between Haitians and American troops sent to restore the elected government of Father Aristide.

Afterward, policemen and soldiers abandoned the city's main military barracks, police station and about a dozen smaller posts.

At the main military barracks, Haitians

took everything they could get their hands on. Some people fired guns into the air, but many appeared to be handing the weapons over to some of the 1,900 U.S. Marines in Cap-Haïtien.

A U.S. military spokesman identified the 10 Haitians killed in the firefight Saturday.

Haiti is likely to receive up to \$550 million in aid from international donors. Page 5.

day as "Haitian military police" but gave no other details.

In New York, President Bill Clinton said in a statement Sunday that U.S. troops were authorized to use force to defend themselves.

"We regret any loss of life in connection with our mission in Haiti, but it must be clear that U.S. forces are prepared to respond to hostile action against them and will do so," Mr. Clinton said.

Given the misfortune U.S. troops had in Somalia last year and evidence that the American public is not entirely convinced of the necessity of intervention here, the firefight raised worries of another unpopular U.S. entanglement in the domestic affairs of a developing country. Congressional critics were gearing up Sunday for an attempt to legislate an early withdrawal from Haiti.

The ransackings in Cap-Haïtien, about 260 kilometers (160 miles) north of the capital, Port-au-Prince, took place in the friendly atmosphere of a street fair with many in the crowd pausing to thank the Americans for coming.

But near police headquarters, a group of Haitians grabbed a man and dragged him into a house, apparently believing he was an "attaché."

After the buildings were ransacked, U.S. Marines occupied them without incident. See HAITI, Page 5

## Firefight Opens a New Debate Over Risk and Role for Forces

Compiled by Our Staff From Dispatches

**WASHINGTON** — With the flash of gunfire ending a week of relative calm, senior American officials warned Sunday that the firefight that took 10 Haitian lives may be a forerunner of more violence.

"This is the first bad incident we've had involving directly American troops, but it won't be the last," said the chairman of the Senate Armed Services Committee, Sam Nunn, the Georgia Democrat who was a member of the delegation that brokered the deal with the Haitian military on the entry of U.S. forces.

U.S. Marines killed 10 armed men Saturday evening outside a police station in the northern coastal city of Cap-Haïtien. It was the first violent incident involv-

ing Americans after a surprisingly peaceful first week of U.S. occupation, and it drew quick comparisons to hostile attacks against U.S. troops in Somalia.

While administration officials responded by reassuring the American public, congressional critics geared up for an attempt to legislate an early withdrawal from Haiti.

President Bill Clinton, in New York for a meeting with United Nations Secretary-General Boutros Boutros Ghali, issued a statement expressing regret for the loss of life and saying: "It must be clear that U.S. forces are prepared to respond to hostile action against them and will do so."

Speaking later in a Harlem church, Mr. Clinton lamented the difficulty of See FIGHT, Page 5

## Kohl's Partners Keep Hold of Bavaria

Compiled by Our Staff From Dispatches

**BERLIN** — The conservative Christian Social Union, the Bavarian branch of Chancellor Helmut Kohl's Christian Democrats, fended off the Social Democrats on Sunday to keep its political hold on Germany's largest state, early voting results showed.

The big losers three weeks before national elections were the Free Democrats, coalition partners in the Bonn government. They did not achieve the 5 percent threshold needed to stay in Bavaria's Parliament.

The party, led by Foreign Minister Klaus Kinkel, has failed in all five state elections this year to win seats in the state Parliaments.

The Social Democrats' top candidate in Bavaria, Renate Schmidt, said Sunday's outcome indicated that every vote for the Free Democrats in Oct. 16 nationwide elections would be "a vote thrown away."

If the Free Democrats fail to return to the federal Parliament, Mr. Kohl could be hard pressed to continue his 12-year reign as chancellor unless his alliance with the Christian Social Union — the sole exclusively state party that plays a role in Bonn, as a member of the coalition — wins a clear majority.

On the federal level, Mr. Kohl's Christian Democratic Union and the Christian Social Union are backed by about 43 percent of the electorate, according to the latest polls.

That compares with 38 percent for the Social Democrats.

The Free Democrats won just 3.9 percent of the vote in Bavaria on Sunday, down from 5.2 percent in the last state balloting, in 1990, according to unofficial early results.

The far-right Republican Party failed once again to get into the Parliament that sits in Munich, dropping to 3.9 percent from 4.9 percent four years ago, according to projections.

Bavaria's premier, Edmund Stoiber, saw his Christian Socialists win 52.8 percent of the vote, down from 54.9 percent, while the Social Democrats improved to 30 percent.

See BAVARIA, Page 5

## Swiss Approve Anti-Discrimination Law

Compiled by Our Staff From Dispatches

**ZURICH** — Swiss voters on Sunday approved a government proposal making racial discrimination, racist propaganda and denial of the Nazi Holocaust illegal, the government's information office said.

Final results showed 1,132,326 voters, or 54.6 percent of the total, said, "Yes," to the law, while 999,738, or 45.4 percent, said, "No."

Slightly more than 45 percent of those entitled to vote took part.

The law is based on a 1965 United Nations convention on racial discrimination and was passed by Parliament in June 1993, infuriating rightists. They quickly

collected the 50,000 signatures needed to force a referendum on the issue.

The result came as a big relief for the government, which had seen its advice ignored in four other recent major referendums and feared another defeat.

Supporters of the ban said the high number of "no" votes dampened their pleasure over the results.

"I'm satisfied, but not happy," said Rosmarie Dormann, a member of Parliament and president of the Yes to the Anti-Racism Law Committee. She said opponents held a range of views, with xenophobia making up only a small part.

Supporters had feared a rejection that

would embarrass Switzerland, reinforcing a series of isolationist votes in recent years that have impeded closer links with the European Union and the United Nations.

The government said the changes in Swiss law were needed to close a loophole to ban discrimination against any individual on the basis of race, national origin or religion.

It also would forbid public attempts to incite or spread hatred or discrimination, ban public expressions that injure human dignity and make it a crime to justify, deny or minimize acts of genocide, such as playing down Nazi attempts to exterminate the Jews.



GIFT TIME — Yasser Arafat, the Palestinian leader, presenting a Torah scroll to Prime Minister Yitzhak Rabin of Israel Sunday as they met in Ezer, in the Gaza Strip. They agreed to start negotiations next week on elections.

## Asia Talks Founder in a Stormy Sea

By T. R. Reid

Washington Post Service

**SEOUL** — Although the negotiating nations have not been fast friends in the past, things seemed to be going well this month when delegates from China, Russia, Japan and South Korea met here to discuss a plan for pollution control in the Sea of Japan.

Then the South Korean press got wind of the meeting, and the negotiators were suddenly engulfed in a tsunami of public protest that threatened to sink the project.

It wasn't that people here were upset about the environmental plan's technical

details. Rather, the outrage was directed at three words at the top of the document: "Sea of Japan."

Around the world, virtually all maps and all international geographic organizations agree that the body of water between Japan and the Asian mainland is the Sea of Japan. But in Korea, those words evoke angry memories of Japan's 40-year occupation of Korea in the first half of this century.

Since ancient times, the Koreans have referred to the sea off their east coast as the Tonghae, or the East Sea.

Across the sea, in Japan, the same body of water is known as Nihon Kai, or the Sea of Japan.

This name was apparently picked by European navigators during the age of exploration, according to Takeshige Hishiyama of Japan's Geographic Survey Institute. The oldest known map of East Asia, drawn by the Jesuit missionary Matteo Ricci in 1602, uses Sea of Japan.

When the Japanese colonized Korea in this century, they outlawed the Korean

See SEA, Page 5

**Kiosk**

**Giscard Censures Mitterrand Acts**

PARIS (Reuters) — Valéry Giscard d'Estaing accused his successor as president of France, François Mitterrand, on Sunday of meddling with justice by slowing legal proceedings against former Nazi collaborators.

"What I don't accept is intervention in judicial procedures," Mr. Giscard d'Estaing, of the center-right Union for French Democracy, told RTL radio.

**Swedes Upset U.S. In Davis Cup Tennis**

Magnus Larsson defeated Todd Martin on Sunday, 5-7, 6-2, 6-2, 6-4, in the last match of a Davis Cup tennis semifinal that started with American confidence and ended in Swedish celebration. But the Swedes' improbable 3-2 victory had more to do with an American breakdown than a Swedish breakthrough. Page 21.

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Crossword Page 21

**Newsstand Prices**

Andorra.....9.00 FF	Luxembourg 60 L. Fr
Antilles.....11.20 FF	Morocco.....12 Dn
Cameroon.....1.40 CFA	Oman.....8.00 Rials
France.....E.P. 5000	Réunion.....11.20 FF
Germany.....9.00 CFA	Saudi Arabia.....9.00 R.
Gabon.....950 CFA	Senegal.....960 CFA
Greece.....300 Dr.	Spain.....200 PTAS
Ireland.....2.600 Lire	Tunisia.....1.000 Din
Ivory Coast.....1.120 CFA	Turkey.....T.L. 35.000
Jordan.....1 JD	U.A.E.....8.50 Dirh
Lebanon.....US\$ 1.50	U.S. Mkt (Eur.) \$1.10

**Chic Conspiracy in Italy?**

**High Fashion Spies Plot in New Inquiry**

By Alan Cowell  
New York Times Service

**ROME** — First came the clothes and the label that made Giorgio Armani a byword for "bella figura," the defining master of chic.

Then came the fall. Mr. Armani became the latest of Italy's high-ticket, high-profile fashion designers to go before Milan's graft-busting magistrates and, according to his lawyer, admitted Saturday to paying a kickback to tax inspectors in 1990.

Now it is time for the conspiracy, or at least the conspiracy theories that are as much a part of Italy as pasta, or corruption inquiries, or Mr. Armani's suits.

"The timing was just too perfect," said Giuseppe Della Schiava, head of Italy's National Chamber of Fashion. "I can't point my finger at anyone in particular, but I do believe the fact that the news broke right now is part of a propaganda campaign against Italian fashion."

He is not the only one to ponder a link between the flurry of inquiries into the finances of Italy's high fashion and the fact that Italy's annual ready-to-wear shows are about to spring onto the runways of Milan.

"Why the designers and not the pastry makers?" said Philippe Daverio, a senior official of Milan's city council. "Why did they start the investigations now, just a few days before the international shop-window opens in Milan?"

On Saturday, Gianfranco Ferré, another top-level designer, was interrogated by Milan's best-known anti-corruption investigator, Antonio Di Pietro. And, over the

See ITALY, Page 5

**Cru des Ptolémées Has an Image Problem: All Its Years Are Lousy**

By Chris Hedges  
New York Times Service

**TAFTISH AL-BAHARY, Egypt** — Said Ibrahim never met a bottle of wine he didn't like.

"No matter what happens, we can always fix it," said Mr. Ibrahim, an official at Egypt's only winery. "We don't throw anything away."

But despite 23 years of making and doctoring Egyptian wines like Cru des Ptolémées, Néfertiti, Omar Khayyam and Reine Cléopâtre, Mr. Ibrahim has no stomach for his own product.

"I don't let it in my house," he said, seated in his office at the Gianacis winery in this village northwest of Cairo. "I have to taste it here. That's enough."

Some of the first wines in the world came from ancient Egypt. Today, the country offers some of the worst.

The U.S. Embassy has warned tourists and foreign residents to avoid local alcohol, which it says can cause blindness and even death. Those who do drink it complain of gargantuan hangovers.

"I mix the rosé with Seven-Up to give it some taste," said John Rees, 28, a teacher of English, as he sat in a bar in Cairo, "but even then I get terrible headaches and diarrhea. The wine tastes and smells like vinegar. It is often a musty, brown color and the corks are dirty. We throw a lot away."

But in a country that severely limits imports of foreign alcohol and taxes it so heavily that a bottle of French table wine costs \$40, many have no choice if they want to drink wine. Egyptian wine costs \$4.50 and tourists often order it — once.

Egyptian Vineyards Co., which says it sells 240,000 bottles a month, has a monopoly on wine production in Egypt. It is one of 10 state companies that the government has agreed to privatize as part of a long-delayed economic program backed by the World Bank.

But after four months, the company, which the government hopes to sell for \$67 million, has yet to receive a bid. The Gianacis winery, founded by

Nestor Gianacis in 1903 and nationalized in 1969, is situated along a canal in a remote area just east of the desert road to Alexandria.

Its 10,000 acres of vineyards are unkempt. Peeling yellow stucco buildings surround mounds of discarded green bottles, rotten grapes, old wooden barrels and a dirty bottling plant.

"We lay out bottles and see dirt floating around in them," said Heba al-Sayid, a Cairo restaurant owner. But in the winery they said they had given up long ago on the local market.

"Egyptians won't drink our wine," acknowledged Abdel Moti Abdel Salaam, who, like most workers at the winery

does not drink what he makes, "and there seems no way we can get them to start. We target the tourists."

The managers of the company say their image problem is unfair. They blame bootleggers, saying they pour their own concoctions into old bottles and sell them under the brand names.

"People drink this stuff that has our label on it and get poisoned," said Raouf Abu Kila, a manager at the winery.

"Things were especially bad after President Mubarak's pilot drank our whiskey and went blind. But the truth is, Egyptian wine is better than French wine. After all, the French don't have the Nile."



# Mass Producer of Ad Music Subsidizes His Serious Side

By Steven Brill  
International Herald Tribune

**TOKYO** — There probably is no one in Japan who has not heard one of his tunes like an endless tape-loop inside the brain, but few can recognize his name or face.

At 36, Jim Miyake has already written music for more than 1,500 television commercials, including ones for Sony, Toyota, Kirin beer and Coca-Cola. At the peak of Japan's bubble economy a few years ago, he was writing the music for more than 200 commercials a year. He was in such demand that at one point, Japan's five major department stores were simultaneously airing commercials using his music.

Today, although he continues to write jingles, albeit at a slower pace, his heart lies in music that is decidedly uncommercial. Last year, he put up \$250,000 of his own money to produce an album that was not constrained by practical aims.

Released by Sony Records in Japan, "Entropathy" is an elaborate yet immaculately recorded production that achieves a surreal sensibility by linking a series of musical vignettes ranging in style from traditional Japanese to Caribbean island to Rudy Vallee. It was co-produced by Hal Willner, who is known for hiring artists as disparate as Tom Waits, Sun Ra and Keith Richards to record tributes to

Thelonious Monk, Kurt Weill, Walt Disney and others. "Everything in art is saturated," Mr. Miyake says. "The quick way to get out of the struggle is to keep mixing until you find something totally new."

The record has sold reasonably well for alternative music, but so far his subsidy is still much higher per disk than the list price. He doesn't seem to mind. He still hopes to sell the rights overseas.

Besides, "Entropathy" represents a full circle for a trumpeter who became disillusioned with Tokyo's corporatist jazz scene and whose creative drives are increasingly frustrated by executives.

"I was afraid of being controlled by the record companies, so I went alone," he says, explaining why he put up the money before he landed a contract and why he haggled with Sony for more than a year to secure overseas rights to the recording.

In Japan, composers for television commercials are paid one-time fees, unlike the United States and other countries where writers receive residuals. As a result, Mr. Miyake has earned just a fraction of what he would have for similar work elsewhere. Still, he has done well enough to rent a sprawling apartment in the fashionable Daikanyama district of Tokyo for his wife

and 7-year-old daughter, and to be chauffeured about town in a Saab.

Far from ostentatious, though, he has the deep-seated calm of someone who swims and practices trumpet daily and likes to take long midnight strolls, notebook in hand. "Doing the same thing every day is my method," he explains. "That way I find a different part of myself every day."

Mr. Miyake's self-discovery got into gear when he defied the wishes of his parents and enrolled as a performance major at the Berklee College of Music in Boston in 1976. Like many students there, he learned more outside the classroom than in. He spent more time in New York than in Boston, much of it playing trumpet and hanging out with Terumasa Hinn, the dean of Japanese jazz trumpeters, who had taken Mr. Miyake under his wing several years earlier.

After graduating in 1980, he moved to New York, supporting himself by working at a Japanese restaurant and staying on a visa acquired through a fraudulent English-language school. But with gigs scarce, he returned to Japan.

"After returning I felt hopeless," he recalls. "The feeling was missing, and the music wasn't natural to the city or the people. It sounded artificial. Jazz society here is in-between the apprentice system



Jim Miyake: "Everything in art is saturated."

and the hierarchical system. It's almost like a Japanese company." The small things bothered him, he said, such as the time he saw an older bass player poke his bow into a younger player.

Mr. Miyake had a stroke of luck in 1983, when TDK, the tape manufacturer, offered him a generous budget to produce a record that also would be used for the company's television commercials. That recording, along with a similar one the next year, enabled him to record with Ron Carter, Michael Brecker, David Sanborn and other prominent jazz performers.

From then on, he slowly built up his name as a writer.

The offers became a flood after his third album, which became a bible of music for TV commercials in Japan.

"People started asking me to imitate myself, but after a while I refused," he says. "Most composers are yes-men to the concept, but I have a hard attitude. In commercials, the film always comes first. But sometimes I tell them to change the edits. Sometimes they do, sometimes I lose the job. It's always on the edge. But this is what you have to do to keep your creativity in Japan."

Fortunately for him, as Japan's economy inflated in the late 1980s the tolerance for fresh ideas was at its zenith.

"Most products were selling," he said, "so the commercials were all about image, which is about imagination."

Mr. Miyake was allowed to indulge his fascination for musical juxtaposition in spots that combined spaghetti Western melodies with reggae hack beats and Debussian harmonization, or Japanese popular melodies sung by Africans with Indian percussion. His work won Clio, Dentsu Advertising and Cannes International Advertising and Film Festival awards, among others.

"I was getting really high by writing all the time," he said. "To make people feel an impact in 15 or 30 seconds, you have to be really intense."

He also managed to find time to be music director at Bohemia, a now-defunct jazz bar that was an oasis for underground artists in Tokyo. He stretched local imaginations by booking acts such as a solo accordion player and by stripping singers of their usual back-up bands, creating uncluttered performance contexts. He also led his own band, which was on a crusade against fusion.

Although he is quite comfortable at a pace of fewer than 100 commercials a year — he can put together a demo in just a few hours — he says he feels a nagging discomfort here. His goal is to write music for films and to live and perform half the year overseas.

## WORLD BRIEFS

### Swedish Support for EU Entry Grows

**STOCKHOLM** (Reuters) — Swedish supporters of European Union membership outnumber opponents for the first time since early 1992, a poll published Sunday showed.

The Sifo poll in the daily Göteborgs-Posten showed that 40 percent would vote to join the EU in a referendum on Nov. 13 while 38 percent would say "no" and 22 percent were undecided. Sweden's government hopes to gain the country's entry into the European Union along with Norway, Finland and Austria on Jan. 1, 1995.

### Pope Is Subdued at Sunday Prayers

**ROME** (Reuters) — A subdued-looking Pope John Paul II held his regular prayers on Sunday, ending a week marked by rising worries about his health.

The Pope was helped as he took his place at the lectern at a window of his residence in Castelgandolfo from where prayers were led. The Pope, who called off his trip to the United States to speed his recovery from a broken leg, spoke for about 20 minutes in a monotone to several hundred faithful at Castelgandolfo. He made none of the spontaneous comments and jokes that are the frequent hallmarks of his Sunday ceremonies.

### Toll Mounts in Philippine Mudflows

**PORAC, Philippines** (Reuters) — Philippine Army helicopters on Sunday plucked scores of people from treetops and rooftops as mudflows from Mount Pinatubo buried more than 1,000 houses and killed at least 23 people.

President Fidel V. Ramos flew over devastated areas in Pangasinan Province and ordered relief operations stepped up after seeing rivers of steaming mud flowing down the volcano 100 kilometers (60 miles) north of Manila.

Officials threatened to forcibly evacuate thousands of residents who refused to abandon their homes in areas lying in the path of the avalanche of mud that has submerged almost 1,400 houses and ravaged 15 villages in Porac and Bacolor districts in three days. Flows of up to four meters (13 feet) in some places, have burst dikes set up by villagers around their communities.

### China Shoots 64 in Mass Executions

**HONG KONG** (AP) — Authorities in two Chinese cities have executed 64 people in two days on charges of murder, rape and robbery, a pro-Beijing newspaper here reported Sunday.

A total of 45 people were executed after mass sentences on Friday in Wuhan, capital of Hubei province, in the biggest executions in that city since 1983, the newspaper, Ta Kung Pao, said.

Those executed included Xu Wulong, who strangled her husband because she was having an affair with another man, the paper said. The newspaper also reported that 19 people were executed Saturday in Guangzhou. Executions are carried out in China by a bullet through the back of the head.

### Russia to Discuss Rehabilitating Czar

**MOSCOW** (Reuters) — Russia's Parliament is to take a new look at how to rehabilitate Czar Nicholas II, killed in 1918 on the orders of Lenin, a top parliamentary official said Sunday.

A news statement from the State Duma, the lower house, said the parliamentary chairman, Ivan Rytkin, promised to do so to Grand Duchess Leonida Georgievna, a relative of the last czar's by marriage. She was in Russia for a reburial ceremony for Grand Duke Georgi, Czar Nicholas's younger brother, who died of tuberculosis in 1898.

"During the meeting she requested that the remains of former Emperor Nicholas II, his wife and children and those who died with him be reburied according to Orthodox Church traditions," the statement said. "Rytkin listened to the request with understanding and told her that Duma deputies intended to consider the question."

### For the Record

A flash flood roared down a mountainside into a stream in Thailand on Sunday, killing at least 17 vacationers and leaving 11 missing, Wang Takrai park, 90 kilometers (55 miles) northeast of Bangkok. (AP)

At least 18 people died on Saturday in clashes between Muslim militants and Indian security forces in the Kashmir Valley of India, the police and hospital sources said in Srinagar. (Reuters)

## TRAVEL UPDATE

### A Timely New Rule for U.S. Airlines

**WASHINGTON** (AP) — Travelers will be able to get more accurate reports of airlines' on-time performance and may be eligible for more money when their baggage is lost under new U.S. Transportation Department rules.

The new rule for on-time performance takes effect Jan. 1, requiring that airlines include delays caused by mechanical problems in their monthly reports. Currently the largest carriers are required to report the share of departures and arrivals that take place within 15 minutes of schedule. That is considered to be on time. But the rules exempt flights delayed by mechanical problems. That exemption will be eliminated.

The department also proposed to increase the limit on compensation to people whose baggage is mishandled to \$1,850. The current limit, set a decade ago, is \$1,250. The department said it would seek comment on the proposed limit and whether it should be increased to \$2,000 or tied to the inflation rate.

The former China Beach base in Vietnam used by American servicemen as a rest and recreation center during the Vietnam War is to become the country's biggest tourist complex under a \$250 million joint venture involving BBJ Investment Group of the United States and a Vietnamese tourism group, press reports said Sunday. (AFP)

More than 170 people have been hospitalized with dysentery in Russia — 112 near Kemerovo, in Siberia, and 60 in Orenburg, near the Kazakhstan border, the Itar-Tass news agency said Sunday. (Reuters)

The Italian Health Ministry sought Sunday to calm fears that Albanian immigrants were bringing cholera to Italy, saying that laboratory tests on food, drinks, water supplies and arriving Albanians so far had turned up no evidence of the disease. (AP)

### This Week's Holidays

Banking and government offices will be closed or services curtailed in the following countries and their dependencies this week because of national and religious holidays:

**MONDAY:** Yemen.

**TUESDAY:** Belgium, Ethiopia, Israel.

**WEDNESDAY:** Taiwan.

**FRIDAY:** Botswana, India.

**SATURDAY:** Botswana, Burma, China, Cyprus, Macao, Nigeria.

Sources: J.P. Morgan, Reuters.

## Q & A: Belt-Tightening Inside the World Bank

The annual meeting of the World Bank and the International Monetary Fund gets under way later this week in Madrid. Lewis Preston, who became the World Bank president in 1991 after a 40-year career at J.P. Morgan, discussed budget cuts and other issues with Alan Friedman of the International Herald Tribune.

**Q.** President Bill Clinton and other leaders at the recent Group of Seven summit meeting in Naples said they wanted to study what reforms were needed at the World Bank and

other Bretton Woods institutions as we approach the 21st century. What do you think needs to be done?

**A.** The most important issues for the bank are selectivity and cost effectiveness. Until a year ago the bank did not even have a cost accounting system. We should not be in every case the instrument chosen by the G-7. And we should not try to be all things to all people. At the Madrid meeting, Kuwait's Abdul Latif Mohammed will chair a new committee that looks at cost effectiveness.

**Q.** Since you took over as president in 1991 the World Bank's administrative budget has risen by 44 percent, to \$1.4 billion, and there is now a staff of 8,338, including 2,000 outside consultants. You recently directed World Bank vice presidents to seek real budget cuts of between 4 and 6 percent over the next two years. Tell me about your plans to cut costs.

**A.** The budget has been rising since the days when Robert McNamara ran the bank. I think Bob was quite rightly trying to stimulate leading activity in the 1970s, and he built an incentive

system into the budget. The challenge was to initiate loans and nobody worried much about implementation. So the bank got stuck with a budget system that kind of distorted things.

Now, we have the obligation to be cost effective, especially since our donor countries are going through serious fiscal constraints. To give the operating people a sense of the plain and simple wish to raise cost consciousness we have set down these new parameters for the next couple of years. But this should not affect our service to our clients.

**Q.** Will that mean also cutting the staff numbers?

**A.** Clearly, if we are going to be cost effective we should look at how we do things, and if there are too many people we will have to exercise some judgment. There is a significant number of consultants.

**Q.** Critics of the bank and the IMF say there are too many bureaucratic projects, and that structural adjustment programs are hurting the poorest people in developing countries, and

thus failing precisely the people they are supposed to help. What is your response to this criticism?

**A.** The bank is trying to be more transparent. I think the critics don't realize that when the fund and the bank are called in, the situation in these countries is in extremis, with inflation out of control. The people hurt by that are the poor. This institution should be very sensitive to the impact on disadvantaged people. But until you get economic growth you are not going to alleviate poverty. When you are sick with cancer you need chemotherapy — and it is no fun, but you need it.

**Q.** In your last fiscal year the bank reduced total new commitments to \$20.8 billion from \$23.7 billion. Was that a deliberate move?

**A.** Yes, and it was a consequence of the enormous private sector flows which are going to these countries. It is important that the bank gets out of the way of the private flows.

**Q.** The World Bank and IMF have been criticized for being

too slow with aid that was promised to Russia. What is your comment on Russia and on prospects for the transition to market economies elsewhere in Eastern Europe?

**A.** I don't agree with the criticism. In Russia we have \$3 billion committed, and a third has been disbursed, largely because they have not met the requirements on conditionality. Elsewhere the situation is uneven. There has been terrific progress in places like the Czech Republic and Poland, a little slipping in Hungary but it's O.K. there. The Baltics are doing well, and particularly Estonia.

**Q.** The recent population conference in Cairo got bogged down because of the Vatican's violent opposition to abortion. What is your view?

**A.** I think the Vatican's early intention on abortion was regrettable, but I think the consensus that emerged on women's education and gender issues and the rights of women in economic life is really terrific. It will give those politicians who are reluctant to do something an impetus.

## Turbulence Tied to U.S. Crash

By Don Phillips  
Washington Post Service

**WASHINGTON** — Federal investigators have determined that the USAir Boeing 737 that crashed near Pittsburgh two weeks ago, killing 132 people, probably entered turbulent air caused by another plane flying about four miles ahead, according to officials.

"Wake turbulence" from the Boeing 727 flying ahead would not have been enough by itself to have caused Flight 427 to spiral from a clear sky almost 5,000 feet (1,500 meters) into the ground. The two airplanes were within required separation limits, and experienced 737 pilots generally fly through such turbulence hundreds of times.

But National Transportation Safety Board investigators were

looking into the possibility that the turbulence, which bubbled into the 737 six to eight seconds before it began its dive, might be one link in a chain of events leading to disaster.

Sources close to the investigation said one theory was that the crew might have overcompensated in taking control of the plane from the autopilot after the turbulence hit. But they emphasized that it was only one of many theories about a crash that has defied explanation.

Sources also said tests on the plane's rudder system had turned up no problems so far. In the past, 737 pilots have reported sudden uncommanded rudder movements, which had to be controlled with their rudder pedals. The Federal Aviation Administration ordered inspections of the rudder mechanisms, and Flight 427's aircraft had been inspected.

A board member, Carl W. Vogt, confirmed that wake turbulence was an issue in the inquiry but said numerous other issues were on the table and still others might emerge.

Mr. Vogt said the board knew early that the other airliner was 4.2 miles (6.8 kilometers) — about 70 seconds — ahead of the 737, but now has learned that the altitude difference between the two was such that the wake would have hit Flight 427.

All aircraft create wakes, spirals of air that churn off wings in flight, moving back and somewhat downward from the plane. Such wakes can be dangerous for small planes and occasionally cause problems for jetliners that venture too close. For that reason, U.S. regulations set minimum distances for following planes. Flight 427 was beyond the required three-mile separation.

## Not to Worry: Channel Tunnel Designed to Leak

Reuters

**LONDON** — The Channel Tunnel between Britain and France is leaking, but the owners are not worried.

Eurotunnel, which is scheduled to open the railway tunnel to passengers from mid-November, confirmed press reports of salt water accumulating in some parts of the tunnel but said this was not serious.

"The tunnel is designed to leak and will continue to leak for the next 50 years," a spokesman said. He said that for every kilometer of tunnel, there are 600 joints in the lining of the wall and in four places the tube designed to take water to the drains had become clogged with silt.

"We didn't expect the clogging, but it is a very minor issue," the spokesman added. "We are talking about a bucket or two of water over a matter of weeks."

The tunnel was officially opened in May by Queen Elizabeth II and President François Mitterrand. The twin tunnels are to carry trucks and cars on a train under the channel in just 35 minutes between Folkestone, England, and Calais, France.

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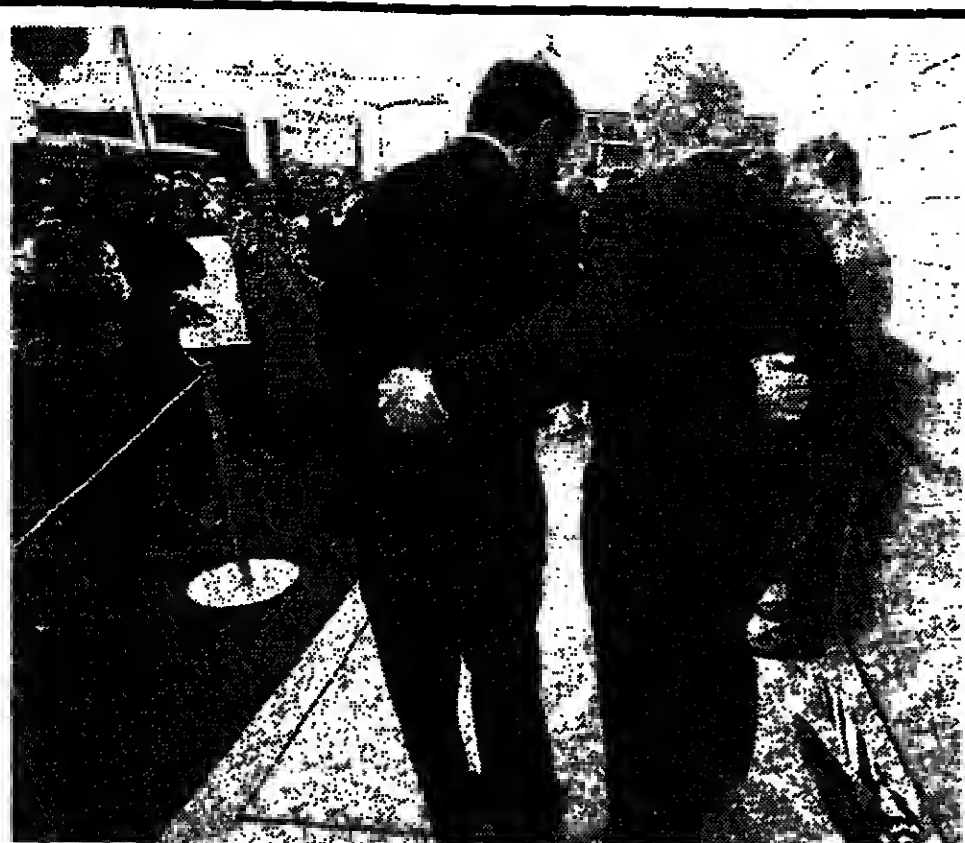
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## THE AMERICAS / DAMAGE REPORT



Gerry Adams, left, being escorted to a news conference in Boston by Mr. Kennedy.

## IRA Chief in U.S. to Raise Support

The Associated Press

BOSTON — Sinn Féin's leader, Gerry Adams, has begun a two-week U.S. tour aimed at building American support for a peace settlement in Northern Ireland palatable to Irish republicans.

Mr. Adams said Sinn Féin, the Irish Republican Army's political organization, would consider a coalition government with the British, who rule Northern Ireland.

But the Irish "have the intelligence and the

wit and the right to govern ourselves, whatever we decide," he said.

Senator Edward M. Kennedy, Democrat of Massachusetts, joined Mr. Adams at a press conference when the Sinn Féin leader arrived Saturday in Boston.

Mr. Adams and Mr. Kennedy urged Prime Minister John Major of Britain not to get bogged down in seeking a permanent ceasefire from the IRA but to begin negotiating with the group.

Probe Finds New Spy Damage  
Report Faults Top CIA Supervisors for Ames

By Walter Pincus

Washington Post Service

WASHINGTON — The CIA inspector general's investigation of the confessed spy Aldrich H. Ames has found that the veteran counterintelligence officer exposed 55 clandestine U.S. and allied operations over nine years, far more damage than previously acknowledged, according to sources familiar with a draft of the findings.

The 400-page classified document, prepared under the direction of Inspector General Frederick P. Hitz, attempts to explain what happened as a result of Mr. Ames's duplicity and how the longtime officer was able to avoid detection while supplying highly sensitive information to Moscow, including the identities of more than 34 secret U.S. and allied agents, these sources said.

The inspector general's report puts the blame initially on the "almost complete indifference of senior CIA supervisors" who, beginning in 1986, failed to recognize the importance of their losses and did not put "adequate resources" into the internal search for a Soviet mole.

This broad criticism of the agency's highest ranks comes when its future is uncertain. It is wracked by internal turmoil caused by budget cuts, uncertainty about its post-Cold War

CIA previously has publicly acknowledged.

Sources said that the report could lead to the reprimanding, early retirement or even dismissal of a number of important agency officials. Such personnel actions in response to internal crises have been extremely rare at the CIA, which has always prided itself on a powerful sense of team loyalty.

According to the findings in the draft report, that institutional loyalty and indifference helped protect Mr. Ames, particularly inside the directorate of operations, the largest element of the CIA whose roughly 6,000 officers manage and conduct clandestine activities.

For example, after a poor performance in Mexico, where he showed bounties of alcoholism and complained about needing money, Mr. Ames was rejected by the Latin American Division as deputy chief of station in Bogota. Nonetheless, when he returned to CIA headquarters he was given a highly sensitive post as chief of the counterintelligence branch of the Soviet Division, where he had access to the identities of U.S. agents.

There is a cry from Capitol Hill for 'heads to roll' as a result of the Ames debacle.

mission and allegations of racial and sexual discrimination.

Congressional critics have become increasingly restive, some calling for reorganization and a few for abolition of the agency. There also is a cry from Capitol Hill for "heads to roll" as a result of the Ames debacle.

A senior CIA official said that the inspector general's report represented "the endgame" in a scandal that has "shaken this organization badly." The 55 clandestine operations exposed by Mr. Ames, according to the report, is about double the number that the

## Yeltsin Ready to Make a Pitch

He's Aiming to Woo Businessmen During Visit to U.S.

By Alessandra Stanley

New York Times Service

MOSCOW — When Boris N. Yeltsin visits the United States this week, America will witness the return of a salesman.

The Russian president aims to do statesmanly things, of course. He will address the UN General Assembly. He will hold a summit meeting with President Bill Clinton.

But mostly, in business meetings in New York, Washington and Seattle, Mr. Yeltsin hopes to persuade American executives that Russia is a blue-chip investment.

"His personal charm can do a lot," said George A. Satarov, a senior aide to Mr. Yeltsin. "The American businessmen will tell him what are the necessary conditions for investment, and our president will explain that such changes are already happening."

Moscow hopes that recent signs of greater economic and political stability, and particularly its success in reducing inflation to 5 percent a month, will stimulate trade and help overcome Americans' fears of doing business in Russia.

That hope is shared by the U.S. government, which reduced aid for Russia to \$850 million this year from \$2.5 billion in 1993. (Stability, however, is relative: On Thursday, the ruble dropped 5 percent against the dollar, its steepest dive in eight months, then bounced back 2 percent the next day.)

"We are encouraged by signs of stabilization and vigor in the Russian economy," said a high-ranking American official involved in preparations for the talks. "We would like to use the summit to emphasize private-sector investment."

To sweeten the pot, Washington is reserving nearly \$30 million of its 1994 Russian aid for programs like the Overseas Private Investment Corp., which offers government guarantees to American companies that invest abroad.

The American official also said the administration expected that nearly \$1 billion in new American investment in Russia would be announced during the summit talks.

Mr. Clinton will try to persuade Mr. Yeltsin of the need to lower tariffs and to draft stronger commercial legislation to lure investment. And to brighten

en the Russians' mood, he signed a declaration last week freeing Russia from the Jackson-Vanik amendment, a law passed 20 years ago to link the Soviet Union's trade privileges to its handling of emigration. Mr. Yeltsin considers the amendment obsolete and deeply humiliating and has complained bitterly about it.

During the visit, Mr. Yeltsin will probably also be watched more closely than usual in Russia after his puzzling behavior last month in Germany during the final withdrawal of Russian troops.

Russian television showed Mr. Yeltsin stumbling on the steps of the Berlin City Hall after a champagne lunch and grabbing the conductor's haton for an anticry at conducting the orchestra himself.

American businessmen in

Russia say that the investment climate in Russia has improved over the last four months. "I've noticed a pretty significant upswing on fact-finding missions," said Peter A. Charow, the president of the American Chamber of Commerce in Moscow.

He cited exorbitant tax rates and constantly changing regulations as some of the major roadblocks to greater American investment, issues which are on the summit meeting agenda.

## Talks With British Leader

Mr. Yeltsin spent the weekend with Prime Minister John Major of Britain in informal talks touching on Bosnia, the Commonwealth of Independent States and Queen Elizabeth II's visit to Moscow next month, Agence France-Press reported.

## ★ POLITICAL NOTES ★

## Republicans Pine for a Sign From Powell

WASHINGTON — His peacemaking exploits in Haiti have reminded Republicans that Colin Powell is a hot political property.

To tell the truth, they needed no reminding. They can read the polls. Not that they expect an early statement of interest in the 1996 campaign from the retired general. What they long for, what they think they deserve, is some sign, however encoded, that he actually is a Republican. General Powell refuses to give it to them.

George Bush, his former commander in chief, his colleague in the successful prosecution of the war in the Gulf, the man he served as chairman of the Joint Chiefs of Staff, asked him, No answer. Former Senator Paul Laxalt of Nevada, whom he has known well since the Reagan era, asked him, too. Again there was no answer.

He has made two contributions of \$1,000 in the fierce Senate campaign in Virginia, but there is no clue there, either. He gave only to the two independents: J. Marshall Coleman, who lives in General Powell's neighborhood, and former Governor L. Douglas Wilder, who has since withdrawn.

"People ask me, 'What about Powell?'" said Charles Black, a Republican campaign consultant. "Great idea, I tell them, but I have a question, too: 'Do you have any evidence that he belongs to either party?'"

The widespread assumption in Washington that General Powell is a Republican stems from his associations with Republican presidents and the vague conservatism of his public statements, such as his emphasis on family values. In a speech last week in Ashland, Ohio, he called Mr. Bush "my beloved friend" and termed Ronald Reagan "a genius."

But there are almost as many reasons to assume the 57-year-old general is a Democrat. As a black man, he is presumed to admire the Democrats' record on civil rights, and he has close though less well-known links to President Bill Clinton.

Some hopeful Democrats even mention him as a possible secretary of state in the seemingly endless speculation about the departure of Warren M. Christopher. (NYT)

## Tamer Ted Kennedy Faces a Tough Race

BOSTON — An exuberant Edward M. Kennedy was on the campaign trail, telling the crowd about the new woman at his side.

"I want you to meet the love of my life — Victoria Reggie Kennedy!" bellowed the 62-year-old senior senator from Massachusetts, whose penchant for partying in the decade between his divorce from Joan Bennett Kennedy and his remarriage two years ago has been lampooned on late-night television.

Then, standing on a picnic bench, he leaned over and kissed his wife. The crowd roared. There were approving murmurs about Mrs. Kennedy's youth — she is 40 — her dark-haired good looks, her megawatt smile.

Mr. Kennedy is facing what may be his most difficult Senate race in 32 years — recent polls show him in a virtual dead heat with Mitt Romney, 47, a Republican millionaire.

Susan Stuart, a heautician, declared: "She's brought him right down to earth. Finally he said, 'This is what it's all about.' I'm a Republican, but I'm going to have to vote for him." (NYT)

## Quote/Unquote

Kevin Chandler, a spokesman for the Minnesota Democratic Senate nominee, Ann Wynn, as President Clinton campaigned for her over the weekend: "I doubt he's much of a help, nor does he do any harm, but he helps raise money and that's what we need." (AP)

## Clifford Rejects Fraud Charge

By Sharon Walsh

Washington Post Service

WASHINGTON — The missing millions from the estate of W. Averell Harriman might be attributable to bad business judgment but not to fraud, according to Clark M. Clifford.

Recalling that he served with Mr. Harriman as far back as the Truman administration, Mr. Clifford called his service as a trustee for the estate "an accommodation," something "you do for old friends."

"What bothers me here is the charge of fraud," he said in an interview. "There's no fraud here. That's an awfully ugly charge that's not sustainable." He added that "somebody has a perfect right to criticize us for

having had business judgment."

Mr. Clifford said that, in any event, no one could hold him financially responsible in the case, since Mr. Harriman had agreed that Mr. Clifford would not be liable for any losses incurred in his role as trustee. The agreement was renewed after Mr. Harriman died, he said.

Mr. Clifford's was responding to a lawsuit filed by Mr. Harriman's heirs against his widow, Pamela Harriman, now the U.S. ambassador to France, and Mr. Clifford and other advisers. The suit, filed last week in federal court in New York, paints a picture of trustees who poured more than \$30 million in trust funds into transparently bad investments without taking the most rudimentary precautions to protect the interests of

Mr. Harriman's children and grandchildren.

"This case is about faithless fiduciaries who betrayed a trust and squandered a family's inheritance," the suit says.

The trustees and others, in a series of interviews, deny they were negligent, and they say that the investments still have great value and that the heirs' motives in suing are based on a long-standing animosity toward Pamela Harriman.

"The heirs were deeply disappointed when their grandfather married at age 80," Mr. Clifford said.

Not in dispute is that a substantial part of one of America's great fortunes — Mr. Harriman was the son of the railroad magnate E.H. Harriman — has, at least for the moment, been lost.

## Jury Phase Opening for Simpson

Reuters

LOS ANGELES — A little more than 100 days after his former wife was stabbed to death, O.J. Simpson was to go on trial Monday in what has become one of the most highly publicized murder cases in U.S. history.

Prosecutors and defense attorneys will face off in a Los Angeles courtroom to begin the process of picking the 12 jurors who will decide Mr. Simpson's fate.

Overshadowing the start of jury selection is the presiding judge's threat to pull the plug on television coverage of the trial because of what he called false and prejudicial news reports.

Mr. Simpson, 47, is charged with the June 12 slayings of his former wife, Nicole Brown Simpson, 35, and a friend, Ronald L. Goldman, 25, who were found stabbed to death outside her Brentwood town house. He has pleaded "absolutely 100 percent not guilty."

Both sides have been accused of trying the former football star in the press, using a steady flow of leaks to taint the views of prospective jurors.

Infuriated by what he called "fabricated" news reports, Judge Lance A. Ito of Superior Court said Friday he would convene a special hearing this week on whether to bar one local television station, KNBC.

Despite a denial by the prosecution, KNBC stood firmly behind the story that angered the judge — an anonymous report that DNA tests of blood found on socks in Simpson's mansion had tested positive for his former wife's blood.

Legal experts said that while Judge Ito, who has already barred TV coverage of jury selection, has the power to make good on his threat, his probable intention was to prod news organizations into acting with greater restraint.

Given the crush of pretrial publicity, legal scholars say jury selection will take up to a month.

## Away From Politics

• Six Alaska native corporations and the Kodiak Island Borough municipality were awarded \$7.9 million by an Alaska Superior Court jury in compensation for land and archaeological damages caused by the 1989 Exxon Valdez oil spill. The plaintiffs had sought a total of \$120 million.

• The Coast Guard mounted an air and sea search at Neah Bay, Washington, but could not find an elusive oil slick reported near a major wildlife refuge. The spill of heavy fuel oil was found Friday at three sites, but was later lost in fog.

• The wife of a former San Francisco police chief died after smoking crack cocaine. Richard Hongisto said his wife, Susan Chavez Hongisto, was found dead several hours after leaving their house after an argument. She had a history of drug use.

Reuters, AP

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## North Korea Warns U.S. on Maneuvers But Stays at Talks

GENEVA — United States and North Korea held another round of talks Sunday on Pyongyang's nuclear activities despite threats from North Korea to withdraw because of U.S. naval exercises off its shores.

Officials from the two nations met for a third day of negotiations in Geneva, hours after North Korea's Commu-

nist government denounced the United States for what it called "undisguised military provocations."

A North Korean official said that the talks were continuing normally but that the Pyongyang delegation told the Americans at the start of the session that it was unhappy about the naval exercises.

"The delegation expressed its opposition to the maneuvers because talks and military pressure do not go together," the official said.

Diplomatic sources close to the talks said they doubted that the North Koreans would walk out of the discussions.

The two countries began the current round of meetings pledging to work to reach an accord on North Korea's nuclear power program.

But both sides indicated in briefings Saturday that there were several hurdles to be cleared before they could agree on a final document.

A North Korean Foreign Ministry spokesman said the deployment of a U.S. naval force in the Sea of Japan could wreck the negotiations and force Pyongyang to end its freeze on most of its nuclear power program.

"We have no intention to hold talks exposed to military threats," the spokesman said in an official Korean Central News Agency dispatch monitored in Tokyo.

Diplomats said such language was to be expected because a U.S. admiral had said the naval presence could be compared to pressure put on Haiti's military leaders to step aside.

Sunday's first meeting of technical experts adjourned after three hours.

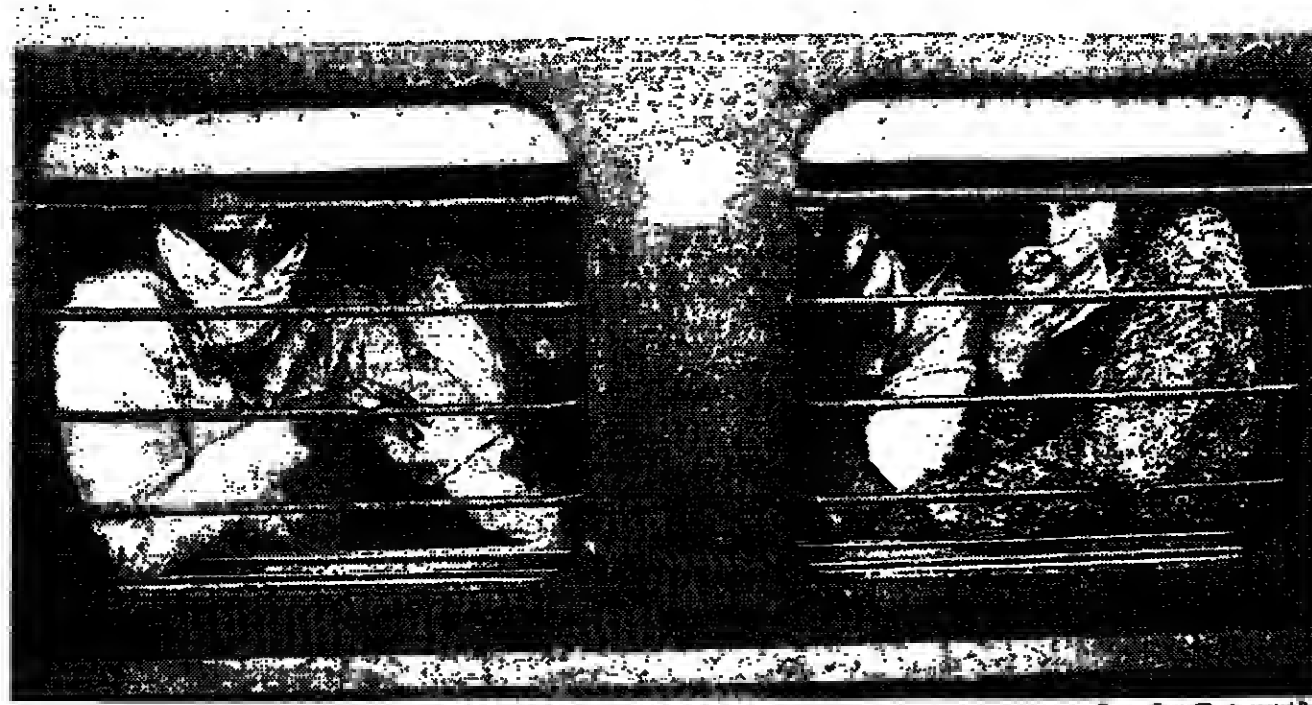
## Defying His King, Buthelezi Holds 2d Rally for Zulus

KWAMASHU, South Africa — South Africa's top Zulu politician, Chief Mangosuthu Buthelezi, defied his king's ban on Shaka Day celebrations Sunday to address a second rally marking the birth of their Zulu nation.

But the rally in this battle-worn black township, like one addressed by Chief Buthelezi on Saturday in the rural town of Stanger, went off peacefully despite widespread fears of factional violence.

Glossing over the fact that King Goodwill Zwelithini had canceled this year's festivities commemorating the 19th-century founder of the Zulu nation, Chief Buthelezi told 15,000 supporters he would fight to ensure the Zulu monarchy in South Africa's post-apartheid constitution.

The king canceled the celebrations, saying he feared for his life after supporters of Chief Buthelezi's Inkatha Freedom Party stormed the royal residence during a visit by Mr. Mandela, the leader of the rival African National Congress.



Passengers covering their faces Sunday as their train passed through Surat, site of the pneumonic plague outbreak.

## Pneumonic Plague Under Control In Gujarat Area, New Delhi Asserts

Agence France-Press

SURAT, India — The Indian government said Sunday that an outbreak of pneumonic plague in the western city of Surat was under control and it appealed to residents to return.

But a health alert remained in force in seven of India's 25 states and in New Delhi as authorities moved to prevent the disease from spreading beyond Gujarat state.

The government said it had ample medicine to handle the epidemic, and dismissed demands that it seal off Surat or deploy the army to stem an exodus as "neither feasible nor advisable."

"I can now say the situation in Surat is under control," Health Secretary M. S. Dayal said at a press conference in New Delhi.

Municipal officials here echoed his assertion, saying the outbreak of plague, which has

struck in India for the first time in 28 years, had been checked.

The Surat chief administrator, Kundan Lal, said that although some new cases were trickling in to the state-run Civil Hospital, the number of fatalities had fallen dramatically.

The Indian government has put the plague death toll at 44 but doctors and residents here say several dozen more may have died.

New Delhi on Sunday asked Surat to set aside a 750-bed city hospital as a quarantined facility for 407 suspected plague patients and ordered a hunt for 100 victims who left the clinic without authorization.

"No uncurable people will now leave the hospital," Mr. Dayal said, appealing to the hundreds of thousands of people who have fled Surat to return home.

"This fear psychosis has to be contained," he said.

Some 400,000 people have

fled this industrial city of 2 million, triggering fears that some of them could be carrying the pneumonic plague germs.

An alert was in force in the states of Andhra Pradesh, Karnataka, Maharashtra, Orissa, Rajasthan, Uttar Pradesh and West Bengal and the Indian capital as fleeing Surat residents arrived.

Trains from Gujarat, where the epidemic has spread to a 150 kilometer (90 mile) radius around Surat, are being fumigated and travelers given antibiotics.

Preventive steps have been taken in Bombay, some 270 kilometers (170 miles) south of Surat, amid reports of panicking of antiplagues.

In Surat, people are walking on the streets with noses and mouths covered with handkerchiefs.

## U.S. on Alert For the Plague

New York Times Service

NEW YORK — As part of an effort to prevent the spread of plague, federal health officials plan to increase surveillance at airports in the United States to identify any cases among passengers coming from infected areas of India.

Travelers will not be prevented from entering the United States, even if they are ill, but officials are working out plans on where to hospitalize such people if the need arises.

Cards will be given to travelers from the infected areas to alert them to call a doctor if they develop a fever or become ill, said Dr. Duane J. Gubler, a federal expert on plague. He emphasized that plague is easily treated with antibiotics if the infection is detected early.

## Two UN Agencies At Odds on Report Of Rwanda Killing

KIGALI, Rwanda — Two United Nations agencies were at loggerheads Sunday over a report by the UN refugee agency that Tutsi soldiers of the new Rwandan government were systematically killing Hutu.

The UN Rwanda Emergency Office, which is coordinating UN operations in the central African country, said the report lacked evidence and was based on rumors.

The report, by the office of the UN High Commissioner for Refugees, "gave no physical or forensic evidence of its claims," a UN Emergency Office spokesman said.

"We certainly want to support this government, not undermine it with uninvestigated rumors," the spokesman said. "These are sensitive allegations made without proof."

The office of the UN High Commissioner for Refugees said in a report issued Friday in Geneva that a consultant it hired had found a "consistent pattern" showing that Rwanda Patriotic Front soldiers, who are mostly Tutsi, had harassed, intimidated and killed members of the majority Hutu tribe.

The Front came to power in July after a three-month civil war during which hundreds of thousands of Tutsi were massacred by the Hutu-dominated government army and militia.

The High Commissioner for Refugees said Sunday that it stood by its report.

## Peacekeepers' Chaos

For seven minutes — the length of their visit to the Mugunga Refugee Camp — the

Japanese defense minister and his Zairian counterpart turned tranquility to chaos. The Associated Press reported from Goma, Zaire.

Tokuichiro Tamasawa flew to Goma to get a firsthand look at the start of the first ever deployment of Japanese troops since World War II under Japanese command — and to see the camps where 1.2 million Rwandan refugees are living.

What he got was a fleeting glimpse of the Mugunga camp, about 20 kilometers from the Rwandan frontier, where defeated Hutu soldiers live side-by-side with civilians. But that seemed enough to satisfy him.

"The life of refugees is peaceful, calm and stable," Mr. Tamasawa said after touring the area.

The situation was anything but peaceful when the motorcade suddenly stopped in the middle of the road bordering the camp, blocking traffic in both directions.

Dozens of Zairian soldiers spilled out of their vehicles, waving rifles at the few refugees who dared to try to cross the road. Japanese journalists and cameramen sprinted down the road to catch up to the two ministers.

The bewildered refugees, some carrying firewood and water containers on their heads, crowded together trying to figure out what was happening. "Who is that man? Is he Korean, Japanese or Chinese?" one refugee asked.

Seven minutes after they arrived, the ministers were on the road back to Goma, leaving the refugees still wondering who they were, and why they had come.

## Bosnian Serbs Press Threats Against UN

Compiled by Our Staff From Dispatches  
SARAJEVO, Bosnia-Herzegovina — Bosnian Serbs stepped up their campaign of intimidation against United

Nations forces on Sunday in response to a NATO air strike and the imposition of tighter sanctions by the Security Council.

The commander of the Bosnian Serbian Army, General Ratko Mladic, in a veiled threat to the UN peacekeeping force, said he could not take responsibility for the safety of UN operations on his territory.

The main UN relief agency said stocks of food in Sarajevo, where Serbian action has cut off aid convoys and forced the UN to suspend its air bridge, would run out in two weeks.

General Mladic's warning, in a letter to the UN military commander in the former Yugoslavia, General Bernard de La-presle, was the latest in a series of threats after the North Atlantic Treaty Organization air strike on a Bosnian Serbian tank last Thursday.

The Bosnian Serbian Army, besides halting UN military and aid convoys, has forced the closure of Sarajevo airport and prevented UN troops from trying to check that Serbs had removed banned guns from a heavy weapons exclusion zone around the city.

In a further move to pressure the United Nations, the Serbs have rescinded permission for UN helicopter flights over their soil and warned that they could not guarantee the safety of flights to Sarajevo airport, UN spokesmen said.

In his letter, General Mladic said the air raid had destroyed private houses and damaged a school. The United Nations said an unoccupied Serbian tank was hit, in what it described as an appropriate response to Serbian attacks that wounded two of its peacekeepers.

General Mladic said the United Nations should not plan any operations on the territory of the self-styled Bosnian Serbian republic until it had made clear it was a neutral force.

Bosnian Serbs restored gas supplies to Sarajevo on Sunday more than a week after shutting them off, a UN spokesman said.

Electricity and water supplies to the mostly Muslim city remained cut off, he said.

## UN Moves on Sanctions

Barbara Cressette of The New York Times reported earlier from the United Nations in New York.

The Security Council has voted to ease sanctions on Yugoslavia for 100 days in response to a pledge by the president of Serbia to support a peace plan for Bosnia-Herzegovina, halt the shipment of war supplies to the Bosnian Serbs and accept civilian monitoring of the Serbian-Bosnian border.

At the same time, the council approved two additional resolutions intended to punish the Bosnian Serbs for continuing to carry out a "persistent and systematic campaign of terror" while interfering with UN relief and peacekeeping operations.

Financial and commercial activity as well as all political talks with Bosnian Serbs would be frozen until they agreed to a peace accord reached on July 6 and backed by Russia, Europe and the United States.

The Security Council voted, 11 to 2, with 2 abstentions, on the resolution easing sanctions on the Yugoslav federation, made up of Serbia and Montenegro. Approval of the resolution was unexpected because there have been reports of war material being ferried into Bosnian Serbian territory from Serbia, in some cases by helicopter.

## ANDERSONVILLE: The Last Depot

By William Marvel. 337 pages. \$29.95. University of North Carolina Press.

Reviewed by Jonathan Yardley

THE image of the Confederate prison at Andersonville in southwestern Georgia has been fixed in the public mind by two influences: the post-Civil War trial and hanging of its commandant, Henry Wirz, on charges of war crimes, and the publication four decades ago of "Andersonville," a hugely popular novel by MacKinlay Kantor.

Both the trial and the novel depicted the prison not merely as hell on Earth, which in fact it seems to have been, but also as a hell deliberately created by Wirz and his collaborators for the extermination of Union soldiers, which seems not to have been the case at all.

Surprisingly, William Marvel's "Andersonville: The Last Depot" appears to be the first history of the prison to take a genuinely objective approach to the question of how and to what ends Confederate authorities established and operated the prison.

Marvel's own objectivity seems unimpeachable; he is a resident of New Hampshire who presumably has no hidden agenda in defense of the Rebel cause, and his previous books on the Civil War have been enthusiastically received.

Andersonville was established, Marvel writes, in large measure as a direct conse-

quence of Union policy. Until mid-1863, the combatants had maintained an "exchange cartel" under which "both sides had regularly paroled all prisoners and released them, pending exchange, and once that formal accounting had taken place the men were free to fight again."

But in 1863 the Union withdrew from the cartel. The ostensible reason was the Confederate refusal to exchange black Union soldiers, but the deeper explanation appears to have been a reluctance on the part of Lincoln and his generals to prolong the war (and attendant Union casualties) by freeing prisoners to return to the ranks of the Confederacy.

The result was that Rebel prisons rapidly overflowed, especially in Virginia: the Confederate refusal to exchange prisoners in some isolated but productive region, somewhere near a railroad, and preferably in a warmer climate. So far as Marvel has been able to determine, the chief motive of the Confederacy was not to exterminate Yankee prisoners but to meet at least minimal humanitarian obligations to them.

Instead it sent them to Andersonville. It sent them in great numbers before the prison was ready. From the hour he assumed command of the prison, Wirz fought a losing battle against problems of sanitation, hospitalization and rationing.

To be sure, the mortality rate of the 41,000 men whose misfortune it was to be sent to Andersonville was around 35 percent, but this was in spite of, rather

than as a result of, Wirz's policies and labors.

This is in no way to minimize the horror that was Andersonville. Indeed "It's horrible" was all that an early prisoner had in him to enter in his diary upon first entering the prison, and in the ensuing months scarcely anything improved, because whatever gains were made were immediately canceled out by the ever-increasing prison population. The stench of the place was unbearable to those unaccustomed to it, trash was everywhere, the hospital was mobbed and filthy.

Few wartime prisons have been celebrated for cleanliness or charity. There is little reason to believe that Andersonville was significantly worse than its counterparts in the North, only that its statistics were more shocking because its numbers were so much larger. In quoting

Garry Wills's observation that "only the winners decide what were war crimes," Marvel makes the obvious but necessary point that in the trial of Wirz, as in the trials at Nuremberg, the victors arrogated to themselves the power to impose versions of justice that would have been quite different had they been on the losing side. Wirz, an imperfect man, went to the gallows for crimes he did not commit.

Marvel makes a persuasive if not irrefutable case for this interpretation, and he presents it in a fluid narrative. The pity is that far more than a century after Andersonville went out of business, passions still run so high that in some quarters he will have no chance of a fair hearing.

Jonathan Yardley is on the staff of The Washington Post.

## BRIDGE

By Alan Truscott

ON the diagrammed deal South reached an optimistic four-spade contract when her partner jumped to three spades on the second round with a hand on which a less ebullient player would bid two.

East took to opening lead and led a heart to the ace followed by a diamond to the jack and king.

Once East had produced the club ace and the diamond king, he could not have the A-Q of spades since he had failed to open the bidding. East led a second heart and South ruffed. She ruffed a club and led the spade nine. East covered with the ten, an error, as South would have played low. The jack was played, forcing the ace.

This was the moment of truth for West. He should have played the king of hearts, forcing a ruff and promoting East's queen as the setting trick. This was the only real chance for a fourth defensive trick, but West feared to establish dummy's heart queen. He returned his remaining trump, won in dummy when East refused to cover with the queen.

Luckily for South, East held two more diamonds and there were two entries to the closed hand. South crossed to the diamond ten, ruffed a club with dummy's last trump, and led another low diamond anxiously. When East failed to follow, South won with the queen, cashed the spade king, and had the club king and the diamond ace for the last two tricks. She had made an unlikely contract, and decided not to criticize her partner's three-spade bid.

**NORTH**  
♠ 8 7 3  
♥ Q 6 4 3  
♦ A 7 6  
♣ J 8

**WEST**  
♠ A 2  
♥ K 9 7 2  
♦ Q 3 8 6 3  
♣ J 8

**EAST (D)**  
♠ Q 10 5  
♥ J 10 8 5  
♦ 6 5 4  
♣ A 8 5

**SOUTH**  
♠ K 8 4  
♥ A  
♦ Q 10 3 2  
♣ K 7 4 2

Both sides were vulnerable. The bidding:  
East: 1♣, 1♥, 2♥, 3♥, 4♥, 5♥, 6♥, 7♥, 8♥, 9♥, 10♥, 11♥, 12♥, 13♥, 14♥, 15♥, 16♥, 17♥, 18♥, 19♥, 20♥, 21♥, 22♥, 23♥, 24♥, 25♥, 26♥, 27♥, 28♥, 29♥, 30♥, 31♥, 32♥, 33♥, 34♥, 35♥, 36♥, 37♥, 38♥, 39♥, 40♥, 41♥, 42♥, 43♥, 44♥, 45♥, 46♥, 47♥, 48♥, 49♥, 50♥, 51♥, 52♥, 53♥, 54♥, 55♥, 56♥, 57♥, 58♥, 59♥, 60♥, 61♥, 62♥, 63♥, 64♥, 65♥, 66♥, 67♥, 68♥, 69♥, 70♥, 71♥, 72♥, 73♥, 74♥, 75♥, 76♥, 77♥, 78♥, 79♥, 80♥, 81♥, 82♥, 83♥, 84♥, 85♥, 86♥, 87♥, 88♥, 89♥, 90♥, 91♥, 92♥, 93♥, 94♥, 95♥, 96♥, 97♥, 98♥, 99♥, 100♥, 101♥, 102♥, 103♥, 104♥, 105♥, 106♥, 107♥, 108♥, 109♥, 110♥, 111♥, 112♥, 113♥, 114♥, 115♥, 116♥, 117♥, 118♥, 119♥, 120♥, 121♥, 122♥, 123♥, 124♥, 125♥, 126♥, 127♥, 128♥, 129♥, 130♥, 131♥, 132♥, 133♥, 134♥, 135♥, 136♥, 137♥, 138♥, 139♥, 140♥, 141♥, 142♥, 143♥, 144♥, 145♥, 146♥, 147♥, 148♥, 149♥, 150♥, 151♥, 152♥, 153♥, 154♥, 155♥, 156♥, 157♥, 158♥, 159♥, 160♥, 161♥, 162♥, 163♥, 164♥, 165♥, 166♥, 167♥, 168♥, 169♥, 170♥, 171♥, 172♥, 173♥, 174♥, 175♥, 176♥, 177♥, 178♥, 179♥, 180♥, 181♥, 182♥, 183♥, 184♥, 185♥, 186♥, 187♥, 188♥, 189♥, 190♥, 191♥, 192♥, 193♥, 194♥, 195♥, 196♥, 197♥, 198♥, 199♥, 200♥, 201♥, 202♥, 203♥, 204♥, 205♥, 206♥, 207♥, 208♥, 209♥, 210♥, 211♥, 212♥, 213♥, 214♥, 215♥, 216♥, 217♥, 218♥, 219♥, 220♥, 221♥, 222♥, 223♥, 224♥, 225♥, 226♥, 227♥, 228♥, 229♥, 230♥, 231♥, 232♥, 233♥, 234♥, 235♥, 236♥, 237♥, 238♥, 239♥, 240♥, 241♥, 242♥, 243♥, 244♥, 245♥, 246♥, 247♥, 248♥, 249♥, 250♥, 251♥, 252♥, 253♥, 254♥, 255♥, 256♥, 257♥, 258♥, 259♥, 260♥, 261♥, 262♥, 263♥, 264♥, 265♥, 266♥, 267♥, 268♥, 269♥, 270♥, 271♥, 272♥, 273♥, 274♥, 275♥, 276♥, 277♥, 278♥, 279♥, 280♥, 281♥, 282♥, 283♥, 284♥, 285♥, 286♥, 287♥, 288♥, 289♥, 290♥, 291♥, 292♥, 293♥, 294♥, 295♥, 296♥, 297♥, 298♥, 299♥, 300♥, 301♥, 302♥, 303♥, 304♥, 305♥, 306♥, 307♥, 308♥, 309♥, 310♥, 311♥, 312♥, 313♥, 314♥, 315♥, 316♥, 317♥, 318♥, 319♥, 320♥, 321♥, 322♥, 323♥, 324♥, 325♥, 326♥, 327♥, 328♥, 329♥, 330♥, 331♥, 332♥, 333♥, 334♥, 335♥, 336♥, 337♥, 338♥, 339♥, 340♥, 341♥, 342♥, 343♥, 344♥, 345♥, 346♥, 347♥, 348♥, 349♥, 350♥, 351♥, 352♥, 353♥, 354♥, 355♥, 356♥, 357♥, 358♥, 359♥, 360♥, 361♥, 362♥, 363♥, 364♥, 365♥, 366♥, 367♥, 368♥, 369♥, 370♥, 371♥, 372♥, 373♥, 374♥, 375♥, 376♥, 377♥, 378♥, 379♥, 380♥, 381♥, 382♥, 383♥, 384♥, 385♥, 386♥, 387♥, 388♥, 389♥, 390♥, 391♥, 392♥, 393♥, 394♥, 395♥, 396♥, 397♥, 398♥, 399♥, 400♥, 401♥, 402♥, 403♥, 404♥, 405♥, 406♥, 407♥, 408♥, 409♥, 410♥, 411♥, 412♥, 413♥, 414♥, 415♥, 416♥, 417♥, 418♥, 419♥, 420♥, 421♥, 422♥, 423♥, 424♥, 425♥, 426♥, 427♥, 428♥, 429♥, 430♥, 431♥, 432♥, 433♥, 434♥, 435♥, 436♥, 437♥, 438♥, 439♥, 440♥, 441♥, 442♥, 443♥, 444♥, 445♥, 446♥, 447♥, 448♥, 449♥, 450♥, 451♥, 452♥, 453♥, 454♥, 455♥, 456♥, 457♥, 458♥, 459♥, 460♥, 461♥, 462♥, 463♥, 464♥, 465♥, 466♥, 467♥, 468♥, 469♥, 470♥, 471♥, 472♥, 473♥, 474♥, 475♥, 476♥, 477♥, 478♥, 479♥, 480♥, 481♥, 482♥, 483♥, 484♥, 485♥, 486♥, 487♥, 488♥, 489♥, 490♥, 491♥, 492♥, 493♥, 494♥, 495♥, 496♥, 497♥, 498♥, 499♥, 500♥, 501♥, 502♥, 503♥, 504♥, 505♥, 506♥, 507♥, 508♥, 509♥, 510♥, 511♥, 512♥, 513♥, 514♥, 515♥, 516♥, 517♥, 518♥, 519♥, 520♥, 521♥, 522♥, 523♥, 524♥, 525♥, 526♥, 527♥, 528♥, 529♥, 530♥, 531♥, 532♥, 533♥, 534♥, 535♥, 536♥, 537♥, 538♥, 539♥, 540♥, 541♥, 542♥, 543♥, 544♥, 545♥, 546♥, 547♥, 548♥, 549♥, 550♥, 551♥, 552♥, 553♥, 554♥, 555♥, 556♥, 557♥, 558♥, 559♥, 560♥, 561♥, 562♥, 563♥, 564♥, 565♥, 566♥, 567♥, 568♥, 569♥, 570♥, 571♥, 572♥, 573♥, 574♥, 575♥, 576♥, 577♥, 578♥, 579♥, 580♥, 581♥, 582♥, 583♥, 584♥, 585♥, 586♥, 587♥, 588♥, 589♥, 590♥, 591♥, 592♥, 593♥, 594♥, 595♥, 596♥, 597♥, 598♥, 599♥, 600♥, 601♥, 602♥, 603♥, 604♥, 605♥, 606♥, 607♥, 608♥, 609♥, 610♥, 611♥, 612♥, 613♥, 614♥, 615♥, 616♥, 617♥, 618♥, 619♥, 620♥, 621♥, 622♥, 623♥, 624♥, 625♥, 626♥, 627♥, 628♥, 629♥, 630♥, 631♥, 632♥, 633♥, 634♥, 635♥, 636♥, 637♥, 638♥, 639♥, 640♥, 641♥, 642♥, 643♥, 644♥, 645♥, 646♥, 647♥, 648♥, 649♥, 650♥, 651♥, 652♥, 653♥, 654♥, 655♥, 656♥, 657♥, 658♥, 659♥, 660♥, 661♥, 662♥, 663♥, 664♥, 665♥, 666♥, 667♥, 668♥, 669♥, 670♥, 671♥, 672♥, 673♥, 674♥, 675♥, 676♥, 677♥, 678♥, 679♥, 680♥, 681♥, 682♥, 683♥, 684♥, 685♥, 686♥, 687♥, 688♥, 689♥, 690♥, 691♥, 692♥, 693♥, 694♥, 695♥, 696♥, 697♥, 698♥, 699♥, 700♥, 701♥, 702♥, 703♥, 704♥, 705♥, 706♥, 707♥, 708♥, 709♥, 710♥, 711♥, 712♥, 713♥, 714♥, 715♥, 716♥, 717♥, 718♥, 719♥, 720♥, 721♥, 722♥, 723♥, 724♥, 725♥, 726♥, 727♥, 728♥, 729♥, 730♥, 731♥, 732♥, 733♥, 734♥, 735♥, 736♥, 737♥, 738♥, 739♥, 740♥, 741♥, 742♥, 743♥, 744♥, 745♥, 746♥, 747♥, 748♥, 749♥, 750♥, 751♥, 752♥, 753♥, 754♥, 755♥, 756♥, 757♥, 758♥, 759♥, 760♥, 761♥, 762♥, 763♥,







# Herald Tribune

Published With The New York Times and The Washington Post

## Rethinking Nuclear Arms

His prepared text said that, with the passing of Soviet power, nuclear weapons play a "greatly changed" role in American strategy. But in presenting the results of a major Clinton administration nuclear policy review in a speech last week, Defense Secretary William Perry got bolder and said the nuclear role is "dramatically reduced." It's so. The threat now centers on potential rogue bombs, not on real Soviet ones. The sense of civilization and global endangerment is gone. Cold War nuclear diplomacy is only a memory. The army and Marine Corps have been short of these arms and the navy and air force clipped way back.

To us anyway, it is inconceivable that the United States would actually use or brandish the still very large total of 3,000-plus weapons it intends to have on hand in a decade, according to a schedule of reductions planned by the Bush administration and now confirmed by President Bill Clinton. Certainly it is not possible to imagine that the United States plans to use the hundreds of weapons it means to keep in Europe. Nor is it conceivable that nuclear arms would be employed against conventional attack, a theoretical option the administration retains. But for an indefinite period, Mr. Perry made clear, nuclear weapons will remain a factor, diminished but undeniable, in American strategy. Essentially, the Clinton review embraces the Bush policy.

This is a disappointment to those who

feel that the times allow an ever fuller denuclearization of the American arsenal and of American thinking. At a time when the United States is pressing a global campaign to discourage other nations from acquiring or keeping nuclear weapons, for instance, it cannot help for Washington to be reaffirming the value and continuity of its own nuclear arsenal.

At the same time, however, the United States still has not merely the nuclear habit but the responsibilities of a global power. The administration has reasons of prudence not only to call on a lagging Russia to catch up to its earlier disarmament pledges but also to hedge against what Mr. Perry calls the "small but real" risk that Russia, currently with 25,000 nuclear weapons (against 13,000 in American hands), might again become hostile.

Meanwhile, the administration foresees further steps in arms control and disarmament. Whether there will be much of an emphasis on the further reduction of force levels and reinforcement of mutual deterrence in a "START-3" agreement may become clearer in the Clinton-Yeltsin summit. In any event, there definitely will be an emphasis on the new strategic mantra of "MAS," or Mutual Assured Safety: nonproliferation, controls on fissionable materials, safety and security of weapons ("loose nukes") and the like. This new agenda is urgent and laudable in its own right.

—THE WASHINGTON POST.

## North's Divisive Talents

Oliver North has two talents rarely, if ever, combined in the same political candidate. He can squirt water through the gap in his front teeth and strike a target 10 feet away. He also has a rare gift for splitting a political party that normally tolerates almost anyone identified as a Republican.

Mr. North is the Republican official senatorial candidate in Virginia. He faces the Democratic incumbent, Charles Robb, and J. Marshall Coleman, another Republican who is running as an independent. But much of Republican firmament cannot abide Mr. North, including one former president, largely because he misled Congress about the Iran-contra affair.

Ronald Reagan, who seldom ventures into intra-party politics, called Mr. North a liar for asserting that he had directed him to mislead Congress during the Iran-contra investigation. Rather than support the party's nominee, Senators John Warner of Virginia, John Danforth of Missouri and John Chafee of Rhode Island have come out for Mr. Coleman, Robert McFarlane, Mr. North's old boss at the National Security

Council, said of him: "He lies to me, to the Congress, to the president. This is not somebody you want in public life."

Now along comes former President George Bush, with a positively chirpy note in which he offers to endorse Mr. North and help him in any way he can. No reservations from Mr. Bush.

Boh Dole, the Senate minority leader, is plainly conflicted, voting both "yes" and "no." First he described Mr. North as "a loose cannon" who had overstepped his authority when he helped divert arms to Iran to fund the contras in Nicaragua. Then, visions of a Senate majority dancing in his head, Mr. Dole set aside his contempt and campaigned for Mr. North. Never a good actor, he did so tepidly.

Ask the folks at Republican Central what all this means and they'll tell you that the Republican Party is "a big tent." Perhaps. But in the year of North, that tent is too small to accommodate both those who wish to consort with him and those who wish he had never appeared on the scene.

—THE NEW YORK TIMES.

## An Immigration Disservice

The Immigration and Naturalization Service is an agency in disarray, serving neither its clients nor the taxpayers well. The Clinton administration is trying to make changes, starting with the basics of better management. But this is an agency that needs a radical makeover.

The dual mission of the INS is a big problem. It is a law enforcement agency charged with catching and deporting illegal aliens. It is also a service agency that helps foreigners who come to America legally become eligible for work and citizenship. As a recent New York Times series showed, the agency performs poorly. It leaves revenues uncollected. It allows illegal aliens with criminal records to move about the country with impunity. It thwarts the efforts of immigrants seeking basic information. It looks the other way when its own officials engage in corruption. Its inadequate computer systems fail to accurately record or adequately maintain and update data.

Though an arm of the Justice Department, the INS has long been treated like an orphan. During the 1980s particularly, the agency became a dumping

ground for political hacks. Immigration is considered such a losing issue that members of Congress do not want to serve on the committees that are supposed to supervise the agency.

The Clinton administration is trying to make some changes. Its new commissioner, Doris Meissner, has started to reorganize the agency to make field operations more accountable to headquarters. At the same time, she is giving career officials more responsibility while trying to strengthen border controls and deport more criminal aliens.

Congress has increased the agency's budget for the 1995 fiscal year, in hopes that it will use the money to reform itself. But rehabilitating the INS may take longer than public patience will allow. Several border states are suing the federal government, insisting that illegal aliens are draining their resources. At the same time, legal immigrants deserve fair and efficient treatment. It is time for an outside commission to take a hard look at the agency, with an eye toward separating its enforcement from its service functions.

—THE NEW YORK TIMES.

## Other Comment

### Tasks for Clinton and Yeltsin

Russia is becoming, if never quite a "normal" power, at least a more calculable one. So President Bill Clinton will want to dwell [at this week's summit] on those areas — stemming nuclear proliferation, for example — where Russia and America can now cooperate rather than compete. President Boris Yeltsin will be keen to do the same.

Frictions over Bosnia, and the "friendly" invasion of Haiti, make it harder for Mr. Clinton to take up another issue: Russia's bullying of its neighbors. Nonetheless he must do so. Russia has legitimate concerns about the security of its borders and the fate of the 25 million or so ethnic Russians who live

beyond them. But legitimate interests do not excuse illegitimate means — including force — that Russia has used to defend them. Having bargained into his neighbor's affairs, Mr. Yeltsin claims to be looking for ways to settle local conflicts, not stir them up (let alone rebuild a Russian empire). In one place — the disputed territory of Nagorno-Karabakh — he could demonstrate these good intentions, but so far has not.

Thankfully, the time is past when rows between Russia and America shook the world — but getting policy toward Russia right still matters a great deal. If his recent performance is any guide, Mr. Clinton is anything but well-equipped for the task.

—The Economist (London).

# U.S.-Russian Summitry: Oil and Gas Fields Loom Large

By Jim Hoagland

WASHINGTON — The issues of war and peace, and oil and gas, on the shores of the Caspian Sea loom large on the agenda that President Bill Clinton will discuss with President Boris Yeltsin at the White House on Tuesday. On no other issues are Russian-U.S. differences so clear-cut.

U.S. officials expect Mr. Yeltsin to respond positively to Mr. Clinton's proposals on voluntary nuclear weapons reductions, limiting security problems in Central Europe and improving the conditions for U.S. investment and trade with Russia.

But the United States has become openly suspicious of Moscow's meddling in the war between the former Soviet republics of Armenia and Azerbaijan. And Mr. Clinton will now be pressing Mr. Yeltsin not to interfere with the hopes of American companies to play a major role in turning the Caspian into an oil-producing region with the potential to be another Kuwait.

The oil and gas reserves add allure to the Transcaucasia region, long a strategic prize for outside powers. Russia and Turkey, joined in the 19th century by Britain, have waged a political and military struggle for influence that was christened "the Great Game" because of the grand stakes, and tactics, involved.

"This has been a century-long game and now we are back in it," Sergei Karaganov,

head of a foreign policy advisory board appointed by Mr. Yeltsin, says of the developing contest between Russia and Turkey for allies and clients in the Central Asian area both powers neighbor.

The Caspian oil, located in Azerbaijan, Turkmenistan and Kazakhstan, must be pumped out by pipeline to tankers for transport to Western markets. Deciding whether new pipelines go through Russia or Turkey, or perhaps even Iran, is likely to depend on politics as much as economics. That is what makes the Caspian oil question a proper matter for the summit meeting.

Azerbaijan, which has suffered heavy losses of men and territory in the fighting with Armenia over the disputed territory of Nagorno-Karabakh, signed contracts worth \$8 billion with a consortium of Western firms last Tuesday. The consortium, which includes Amoco, Pennzoil, Unocal and British Petroleum, will provide 80 percent of the financing.

But Russia immediately denounced the agreement, which does not specify the pipeline route. Mr. Karaganov, in Washington to help prepare Mr. Yeltsin's visit, stated flatly that there was "no chance that the deal will stick if the pipeline goes

south" through Turkey. "Russia is interested that we control the pipeline."

This presents Mr. Clinton with a delicate mission in trying to bridge the gap between U.S. companies, a war-shattered Azerbaijan and a Russia that is still economically unstable. White House officials point to the presence of Russian energy minister at the contract signing and the fact that a Russian oil company has a 10 percent interest in the consortium as promising signs that Mr. Yeltsin can be talked into, or bargained into, not opposing the deal now.

The White House formally does not take a position on where the pipeline should go. Informally, officials acknowledge they would rather see no deal than a deal that awarded the pipeline, the revenues it will generate and the control it will convey over the region's economic life to Iran.

"Part of the reason of developing the Caspian oil reserves will be to develop an alternative to relying so heavily on oil from the Persian Gulf," said a White House official. "If Iran controls the pipeline, we haven't improved things at all."

There is no clear consensus in the administration whether U.S. interests are best served by supporting a pipeline through Russia, which is eager to maintain the economic links that tied the republics of the south to Moscow, or through

Turkey, a Washington ally in NATO.

At this point, Mr. Clinton will have to walk a fine line as he attempts to coax Mr. Yeltsin into letting the Azerbaijan deal go forward without promising U.S. support for Russia on the pipeline question. That would infuriate the Turks, and the influential U.S. businessmen who work with Ankara.

The president's task is also complicated by disagreement between Washington and Moscow over the war between Armenia, which Russia supports, and Azerbaijan, which Russia supports, and which has refused to host Russian troops on its soil.

Russia is encouraging Armenia, which is winning the war, to hold out for Russian peacekeeping units and observers that would report to the Conference on Security and Cooperation in Europe, as Washington wants. U.S. officials openly question Moscow's intentions in Azerbaijan and accuse the Russians of prolonging the fighting.

America's political and economic interests come together in the Azerbaijan case in a way that demands presidential involvement. Mr. Clinton deserves recognition for the preparation he has devoted to this case and for putting the economics and politics of Azerbaijan on the summit agenda.

The Washington Post.

## Plan Now for Yeltsin's Bitter Legacy

By Stephen F. Cohen

NEW YORK — Boris Yeltsin, Russia's first popularly elected president but unabashed admirer of Peter the Great, comes to Washington this week to visit his own most exalted enthusiast. If their previous summit meetings are any precedent, President Bill Clinton will again embrace "my friend Boris" and his claim to be the indispensable father of a "new democratic and civilized Russia."

Not many influential Russians see Mr. Yeltsin that way any longer, nor are future historians likely to do so. The "irreconcilable opposition," as ultranationalists and defiant Communists are called, still views him as a criminal agent of Western powers who plotted the breakup of the Soviet Union and are now plundering Russia's economy. But, more significantly, fewer and fewer Russian democrats, once Mr. Yeltsin's hopeful supporters, see him as one of their own. Most regard him as an instinctively authoritarian leader who has enabled the former Soviet ruling class to preserve its position, even to enrich and legalize it under the cover of "privatization."

Nor is Mr. Yeltsin's standing with ordinary Russians what it once was. In last December's elections for a new Parliament, the State Duma, various anti-government parties took about 85 percent of the vote, even though Mr. Yeltsin wrote the rules and controlled television. In recent presidential polls, he is preferred by no more than 20 percent of those surveyed. Not surprisingly, Russian newspapers have begun speculating about the "death agony" of the Yeltsin regime.

It may be too early to write Mr. Yeltsin's political obituary. But already we can understand the dangerous consequences of his policies, particularly those in which the United States has been deeply involved. My view is that Mr. Yeltsin's legacy will not be the promised transition to a democratic, free-market system, or even a popular consensus for moving in that direction, but a bitterly divided nation.

Three traumatic policies have characterized Mr. Yeltsin's use of power and shaped Russia today. In December 1991, his sudden and surprising abolition of the Soviet Union shattered an exceptionally integrated economy while depriving 150 million Russians of the only nationhood they had known. In 1992, his attempt to impose a Western-style market economy on Russia by "shock therapy" took away the life savings of most people. Largely as a result, while perhaps 5 percent to 8 percent of Russians have profited fabulously, industrial production has dropped up to 50 percent, at least half the country now lives in poverty or on the brink of it, and general health and life expectancy have declined so severely that even a pro-Yeltsin newspaper calls the situation an "unfolding catastrophe."

His third decision, the unlawful overthrow of an elected Parliament and constitutional order in 1993, then dealt a heavy blow to popular democratic expectations initiated by President Mikhail Gorbachev in the late 1980s.

The political fallout from those excessive policies was predictable and has been confirmed by opinion polls and other sources. In response to Mr. Yeltsin's brand of extremism, "irreconcilable" views, including anti-Americanism and the charge that post-Com-

munist Russia is ruled by a "criminal state," have crept across the spectrum. Most Russians no longer believe in democratic, free-market or other Western-sponsored solutions; they look back on the breakup of the Soviet Union as a mistake or a conspiracy and want some kind of regrouping of former Soviet republics.

Fear and loathing are spreading like a cancer in this long-tormented, ethnically diverse country, where the question "What is to be done?" has too often been answered with "Who is guilty?" Millions of ordinary citizens loathe what has happened to their nation at home and abroad, and ask who "betrayed" them. Understandably, the ruling elite has begun to fear its own people. The escalating anxiety rises like a specter from recent developments reported in the Russian press.

Three are especially revealing. Having broken his promise to hold a presidential election in 1994, Mr. Yeltsin has begun looking for ways to cancel the one now scheduled for 1996. Publicly, his associates are offering to do it in conjunction with the State Duma, which is also up for re-election soon, but privately they are exploring "harder" variants as well.

Second, credible reports suggest Mr. Yeltsin is suppressing evidence that the new authoritarian constitution he put to the country last December — the Clinton administration called it a "great democratic breakthrough" — did not actually get the required 50 percent of eligible votes. If true, everything Mr. Yeltsin has done as president in 1994 also has been unlawful.

Third, a popular young general, Alexander Lebed, recently called for a new political leadership, dismissing Mr. Yeltsin as "a minus." When the president's few remaining military loyalists tried to remove General Lebed from his command, the general



Russian newspapers have begun speculating about the "death agony" of the Yeltsin regime.

## A New Era for Ireland Opens at Last

By John Hume

LONDON — With the announcement of a cessation of military activities by the Irish Republican Army and the commitment of their political voice, Sinn Féin, to peaceful and democratic means to reach an agreement between the people of Ireland that can earn the allegiance of all our traditions, we are now at the beginning of a new era in Ireland.

That was the clearly stated objective of my dialogue with Gerry Adams. Since five British governments and 20,000 troops failed to stop the violence, I took the view that if the killing of human beings on our streets could be ended by direct dialogue, then it was my duty to do so. I am naturally pleased that we have achieved this first major step toward lasting stability.

Now we must move on to our next major challenge: to reach agreement on how we share our piece of earth together. The challenge is to find common ground between two fundamentally different mind-sets, the unionist and the nationalist.

The unionist mind-set, based largely in the Protestant population of Northern Ireland, is akin to that of the Afrikaner who believes that, surrounded by hostility that is real or apparent, the only way to protect his people is to concentrate power in their own hands to the exclusion of all others. That approach is not only doomed to encourage widespread discrimination and conflict but is unsustainable.

Nor does it do justice to the unionist tradition. The unionists of Northern Ireland are justly proud of their heritage and their contribution to the world. As many as 11 American presidents came of their stock. Their number captains of industry and colonial governors among their great men. They see themselves as a pragmatic, hardheaded, straight-talking, skeptical, robust people and

there is much in their history to justify their view.

But the negative impact of their larger mentality has tended to dry up their creativity and paralyze their political talents. The time has come for them to believe in themselves as their own best guarantors in a future shared with the rest of the people of Ireland. They must realize that because of their geography and their numbers, the problem cannot be solved without them. Their true interest depends precisely on the exercise of their traditional gifts of self-confidence and self-reliance. Let them exercise those gifts now by engaging in the political process of dialogue and consensus building.

The nationalist mind-set has traditionally relied less on the discipline of its people and more on its commitment to the territory of Ireland. "This is our land, and you unionists are a minority and you cannot stop us taking it over" can fairly well sum it up. But Irish nationalism has grown in its complexity, and it accepts that unity is not a territorial objective but one that involves people. It is people who have rights and not territory. A divided people can only be brought together by agreement. If coercion entrenches those divisions, only dialogue can bridge them.

In my whole approach to this process, I have been strongly inspired by both my European experience and my contact with the United States. The European Union is the greatest testament to the resolution of conflict. After one of the bloodiest conflicts in history, which left 35 million dead across our continent a mere 50 years ago, Europeans are engaged in a level of cooperation so intense it has blurred the traditional bounds of sovereignty. The political system of the United States com-

mands the loyalty of citizens despite the diversity of their ethnic makeup and experiences. And each U.S. citizen carries in the small change in his or her pocket the maxim that holds the country together: *e pluribus unum*, from many we are one.

We in Ireland are engaged in a process that seeks to give reality to this most profound truth. We must create by agreement, as was done in postwar Europe, institutions that respect our diversity but allow us also to work our substantial economic ground together — and by spilling our sweat and not our blood to begin our healing process. If that happens, a new Ireland will evolve, and the model that emerges may be very different from the models of the past. It will be based on agreement and can earn the allegiance of people from all our traditions.

While we wait for political agreement, we should also work together to build our country economically, concentrating on areas of higher unemployment in the North so that the positive results of the peace process can be visible to young people. We must give them hope and belief in the constitutional process. We must plan to give them the opportunity to earn a living in the land of their birth and to contribute to its development.

My hope, and it is a confident hope, is that the fast approaching 21st century will be the first century in our island history in which the evil genius of mistrust and violence will be finally laid to rest, and politics alone — in all its dynamism and vigor — will direct the affairs of all of the people of Ireland.

The writer, a member of the British Parliament and the European Parliament, is leader of the Social Democratic and Labor Party of Northern Ireland. He contributed this comment to The Washington Post.

hinted that he might inspire a mutiny or undertake a personal bid for the leadership. Mr. Yeltsin immediately retreated, praising the general's "great role" in keeping things "under control."

All three episodes reflect a growing dread of powerlessness and retribution in the Yeltsin camp. No Russian or Soviet leader has ever left power voluntarily. Given the traumas he has inflicted on the country, it is easy to understand why Mr. Yeltsin may not want to be the first. Having ruled mostly by decree (some 2,300 in 1993 alone), without or in open defiance of parliaments, constitutions and laws, having set the precedent of a political trial against the Communist Party in 1992 and then used tanks to imprison his own former allies last year, and having tolerated financial scams that victimized millions of small investors while embracing high-level associates widely suspected of corruption, a powerless Yeltsin would risk becoming the target of any vengeful politics that ensued.

Alarmed and divided, Mr. Yeltsin's inner circle is giving him conflicting advice. One faction is urging an early presidential election before the economic crisis gets even worse and the opposition finally finds a candidate who can at least equal Mr. Yeltsin's lowly ratings in the polls. The other group wants him to shed all such remnants of democratic "romanticism" and become a fully authoritarian leader: a "Russian Pinochet," as General Lebed and even many pro-Yeltsin "democrats" are calling for.

Some Russian analysts doubt that anyone involved in the decisions to abolish the Soviet Union, launch shock therapy or assault

the Parliament could be re-elected. If that is correct, truly democratic elections would oust most Yeltsinists from power. But their hard-line rivals also are unpopular and unconfident, partly because several of them initially supported Mr. Yeltsin's breakup of the union. Moreover, many anti-Yeltsin oppositionists who won seats in the State Duma have shown little interest in investigating the suspect voting results and may go along with his offer to cancel both scheduled elections. They too fear the country's anti-establishment mood.

The Pinochet solution that so clearly tempts Mr. Yeltsin may be even riskier. Russia's aspiring capitalist class is still too small to support such a regime and few army officers could be counted on to do Mr. Yeltsin's bidding; they would more likely turn to their own pretensions. Either way, Russia's historic experiment with democracy would be over.

Will anyone ask Mr. Yeltsin about these retrograde machinations when he visits Washington? Will the Clinton administration change its policy toward Russia before it is too late? That policy, a "strategic partnership and friendship" based on a crusade to transform Russia along American lines, has failed, becoming little more than zealous cheerleading for a leader whose polarizing legacy may far outweigh any good he has done. Without a more ecumenical approach, America will have few friends or partners in post-Yeltsin Russia. Or does America prefer a Russian Pinochet?

The writer, a professor of politics and Russian studies at Princeton University, contributed this to the International Herald Tribune.

## IN OUR PAGES: 100, 75 AND 50 YEARS AGO

### 1894: Zola the Unholy

LOURDES — M. Zola's last novel has been placed on the *Index Expurgatorius*, which means that according to canon law the work ought to be withdrawn from circulation by the author, copies of it destroyed by those who have any, and the edition torn up. The author may be excommunicated if he does not submit. Henceforth all those of the faithful who read the book are in a state of mortal sin.

### 1919: Rail Strike Talks

LONDON — The strike situation on the British railways has cleared up somewhat during the past twenty-four hours, and the imminence of a tie-up of transportation is not so apparent. Representatives of the Railwaymen's Union met to-day (Sept. 25) with Sir Eric Geddes. Immediately at the close of this confer-

ence another was called by Prime Minister Lloyd George, at which were present managers of the various railway companies.

### 1944: British Advance

LONDON — [From our New York edition:] The British paratroopers cut off for eight days in the vicinity of Arnhem, Holland, have waged one of the greatest fights in history and probably will make it possible for Lieutenant General Miles C. Dempsey to turn the corner of the Siegfried line. The American paratroopers who started landing a week ago Sunday (Sept. 17) at the same time as the British have had a less spectacular part in making possible the advance of the British 2nd Army, yet a part which is in no way less essential. At times the advancing British column held no more ground than the vehicles actually occupied on the road.



International Herald Tribune

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## CAPITAL MARKETS

## New Floating-Rate Bond Shows German Flexibility

By Carl Gewirtz  
International Herald Tribune

PARIS — For the first time since unification four years ago, the German government this week will offer investors long-term bonds with a floating interest rate rather than a fixed coupon. Analysts agreed that it was a smart move aimed at breaching the mismatch between investor preferences for short-term exposure with the government's need for long-term funds. They also see it designed to calm fears about an imminent increase in interest rates.

Even more reassuring was last week's announcement of Germany's borrowing requirement for the fourth quarter: about 45 billion Deutsche marks (\$29 billion), significantly below the levels that had been rumored to be potentially destabilizing.

The details of the financing calendar — specifying type of instrument, maturity as well as expected size — was new and welcomed as providing a needed transparency for the market.

The unusual decision to sell floating-rate paper, expected to be a 10-year issue of 10 billion DM with interest most likely at a quarter-point below the Frankfurt interbank offered rate, "should not be interpreted as a sign of weakness," said Richard Reid of Union Bank of Switzerland. "It's a pragmatic solution to a financing problem."

"There is no shortage of savings in Germany," he said, "but there is a mismatch between the high-liquidity preference of savers and the government's need."

With the coupon regularly recalculated in line with money-market rates, investors get an asset that incorporates the essential features of a short-term instrument, while the government gets its money for 10 years. Money-market funds, which were authorized to begin operating in August, are expected to be large buyers of such paper.

Guido Barthels at J. P. Morgan & Co. said the move demonstrated the government's conviction that long-term rates were headed lower. "If bond yields were expected to stabilize or go on rising, the government obviously would sell fixed-coupon paper now. I interpret the decision to issue floating-rate paper as an indication that the Finance Ministry thinks yields will be declining and that fixed-rate paper can be sold later at lower cost."

A fixed-coupon, 10-year bond would be difficult to sell in the current market environment, analysts said. This goes for all currency sectors, apart from the yen.

The World Bank last week sold \$1.5 billion of five-year global bonds. Lead managers were reported to have bought back almost a quarter of the issue to hold the yield steady at the offering spread of 9 basis points over comparable dated U.S. government paper.

This week, Korea Development Bank is expected to sell \$300 million of five-year global bonds. Not only is the size smaller, but

See BONDS, Page 9

## Downbeat Outlook For Dollar This Week

International Herald Tribune

PARIS — This week promises to be a difficult one for the dollar and bond markets in the United States and in Europe, which takes its cue from New York.

The main event will be the meeting Tuesday of the Federal Reserve Board's policymaking panel, who will be looking at the need to raise U.S. interest rates for the sixth time this year.

Whatever the outcome, it looks to be a no-win situation for the dollar.

Analysts agreed that an absence of Fed action this week would fail to soothe fears that a tightening of monetary policy was imminent. Look for "a further bout of weakness for the dollar and U.S. bonds if the Fed fails to act," said Joanne Perez at Banque Indosuez.

But raising rates so soon after last month's half-point increase "carries some risk of conveying the mistaken notion that the Fed is trying to torpedo growth or that officials fear a worse inflation threat than in fact appears likely," said analysts at Salomon Brothers Inc. in New York.

They were convinced U.S. interest rates would rise in coming months.

The Friday deadline for U.S.-Japanese trade talks also will be an important day for the currency market. Washington has threatened to impose trade sanctions if the talks fail.

"While markets may have little expectation of dramatic concession from the Japanese, there is still scope for them to be disappointed," said Joanne Perez at Banque Indosuez.

See DOLLAR, Page 9

## Market Discounts Soros Property Fund

By Leslie Eaton  
New York Times Service

NEW YORK — When George Soros and Paul Reichmann teamed up last year to run a real estate fund, they raised some eyebrows — and a lot of hopes.

Mr. Soros, after all, was the man with the golden touch, the trader who in 1992 made more than \$1 billion by betting against Europe's central banks.

Mr. Reichmann, on the other hand, was the visionary who led Olympia & York Developments Ltd. into bankruptcy, the real estate mogul whose empire collapsed under the weight of London's Canary Wharf development. Wits joked that next Mr. Soros would hire Michael Milken to run a bond fund.

But the partnership was also widely hailed as a sign that commercial real estate might be recovering from the brutal bear market that followed the overbuilding of the 1980s.

If an investor as canny as Mr. Soros was swooping in to snap up office buildings, maybe there was hope even for all those glass-walled structures that have never attracted tenants.

Recently, however, there have been signs that sailing has not been smooth for the \$525 million Quantum Realty

Trust, named after Mr. Soros's flagship Quantum Fund.

Mr. Reichmann is no longer involved in Quantum Realty's daily operations, though he remains nonexecutive chairman of the fund's manager, Reichmann International, which has had three chief executives in as many months. "Everybody's huzzing about it," said one real estate executive.

Investors may have soured on the fund, its share price, which is set by a dealer in London, has tumbled more than 22 percent from its peak in early January, far more than the British stock market's 12 percent decline in the same stretch.

Mr. Soros's funds are not listed on stock exchanges, but are bought and sold by a small group of friendly dealers.

Even more surprising, perhaps, is that Quantum Realty's London dealer, Edgar Astaire & Co., is hiding less than the shares than Quantum Realty says they are worth based on the value of the fund's holdings. Last week, the fund's net-asset value was reported as about \$135 a share, but the dealer hid just \$121, a 10 percent discount.

Matthew Wilson, head of finance and administration for Edgar Astaire, said that Quantum Realty was trading at a discount "because it is in real estate;

most real estate companies trade at a discount to their net assets."

But Mr. Soros's funds are famous for trading at a steep premium to the value of their holdings; the flagship Quantum Fund itself, which takes big bets in stocks, bonds, and currencies, maintained a double-digit premium even after Mr. Soros acknowledged he lost \$600 million on Feb. 14 because of a bad bet on the yen.

Until recently, Quantum Realty had followed that pattern, generally trading at a premium, sometimes a large one.

At worst, in September 1993, the dealer's bid had briefly hovered just below net-asset value. But since May, the bid has been sinking steadily, while the net asset value has remained fairly steady.

Quantum Realty's recent discount "is a significant event in the way the whole empire functions," said the head of a large money management firm.

The new head of Quantum Realty's manager, Vernon Schwartz, acknowledged that Reichmann International might have looked like it was in some turmoil but he said the succession of executives "was not as disorganized as it appeared."

As for the rumors that Mr. Soros and Mr. Reichmann have had a falling out, Mr. Schwartz said he had heard them but refused to comment.

## Singapore To Shift Savings

## Foreign Markets Become Eligible For Investments

By Michael Richardson  
International Herald Tribune

SINGAPORE — In a move to strengthen its position as an Asian financial center and invest more of its surplus savings overseas, Singapore will take a series of steps over the next few years to encourage development of fund management and investment banking.

The measures, announced over the weekend by Lee Kuan Yew, Singapore's senior minister, will greatly enlarge the amount of Singapore capital available for foreign investment and attract international financial institutions, bankers said Sunday.

Mr. Lee indicated the pool of money available by the end of the decade for private-sector management as a result of the reforms could be 80 billion Singapore dollars (\$54.1 billion).

The money will come from the country's compulsory savings plan, known as the Central Provident Fund, and from state agencies, utilities and government-linked companies.

Largely as a result of the fund, Singapore has a national savings rate of about 46 percent of its gross national product, one of the highest levels in the world.

Government-controlled statutory boards have accumulated significant financial surpluses and have not had to turn to the private sector for capital in a major way.

However, Mr. Lee said Sunday that "comfortable in-house loan arrangements" would not help government officials and executives of government-linked firms "sharpen their sense for opportunities and innovation, which is necessary for a successful financial center."

For some time, members of the central fund have been allowed to buy shares in certain Singapore companies. Starting in January, rules will be altered to allow them to invest in foreign stocks and bonds through approved unit trusts and fund management companies.

Initially, investments will be confined to foreign shares and bonds traded on the Singapore stock exchange and to selected regional markets, such as Malaysia, Thailand, Hong Kong, South Korea and Taiwan.

But Mr. Lee said that beginning in January 1999, the scope would be widened to include capital markets outside Asia, such as the United States, Germany and Japan.

Limits on investments denominated in foreign currencies, which will be set at 20 percent of the value of a fund are to be raised to 50 percent by 1999.

## Germany Wary of Plans for IMF Aid

Bloomberg Business News

FRANKFURT — Germany, which has long urged other countries to help former Communist countries onto their feet, now finds itself complaining that such assistance could be uncomfortably inflationary.

In particular, the German central bank is worried by a plan by senior International Monetary Fund member states to provide increased capital to the former Communist bloc in the form of Special Drawing Rights.

SDRs, a type of currency based on credit with the fund, have long occupied an incon-

spicuous corner of the financial world. But the looming debate between the Bundesbank and its major counterparts promises to thrust SDRs into the spotlight at the IMF annual meeting, which is to start Wednesday in Madrid.

At issue for the Bundesbank is the inflationary impact of a large injection of marks into the world monetary system.

Although the Bundesbank may well force other countries to compromise on how many SDRs will be issued, the proposed increase, amounting to about 36 billion SDRs, would

equal roughly 82 billion Deutsche marks (\$53.66 billion).

Only a portion of this amount would actually be converted into marks, but many in the Bundesbank worry about the consequences.

"In view of the abundance of international liquidity, I see no point in taking artificial measures to add even more to global liquidity," Bundesbank President Hans Tietmeyer said earlier this month.

Economists said that two interrelated factors are leaving the Bundesbank unhappy about the prospect of new SDRs.

First is the notion that the Bundesbank does not favor greater world liquidity. The bank feels there is enough money to meet the world's needs and fears an increase would lead to higher global inflation that no country, including Germany, could avoid.

A second aspect of SDR creation is that many of those SDRs could be converted to marks, making it hard for the Bundesbank to keep a grip on its money supply. Some economists say the mark share could total more than 20 percent of the SDR issue.

## Frankfurt Notebook

## Why Is This Man Missing?

Was Jürgen Schneider, the German developer whose disappearance left banks holding \$3 billion Deutsche marks (\$3.25 billion) in bad debt, himself the victim of foul play?

In the latest twist of this mystery, Mr. Schneider's lawyers have asked federal investigators to conduct a handwriting analysis of letters that entrusted them with control of his affairs before he disappeared about Easter.

Rumors suggest Mr. Schneider could be either dead or the unwilling accomplice of organized crime or terrorist interests set on getting hold of money he transferred abroad.

Mr. Schneider's lawyers say they have had no contact with their client in months.

A spokesman for the Frankfurt prosecutor's office, however, which is coordinating the search, said Mr. Schneider had "left a track" a few weeks back. Iranian opposition figures in Bonn have suggested he was holed up in Iran.

The developer has been charged with credit fraud, document falsification, looting his companies when he knew they were about to go bankrupt and tax evasion.

People's Stock Missing Its Market

Germans are perplexed at the advent of the Volksaktie, or people's stock, the nominal value of which is 5 DM rather than the usual 50.

Such inexpensive shares in Fielmann AG, Europe's largest optician and the first to test the tool, were originally offered only in blocks of 50 or 100 shares, making it unappealing for small investors. Although Fielmann stock can now be bought and sold individually at a daily fixed price, most banks and brokers refuse to trade it in small lots at variable prices.

Martin Kohlhausen, chairman of Commerzbank AG, said banks would lose money

if they traded popular stock in small lots. "I don't think the 5-DM share will contribute to the popularization of equities, but I'd welcome it if it did," he said.

But as traders in Volksaktien stumble, companies are lining up to issue the discount shares. Daimler-Benz AG, Allianz AG Holding, Bayer AG and Deutsche Bank AG are considering the issue of 5 DM shares and Schering AG, the pharmaceuticals company, plans to convert all of its outstanding shares to Volksaktien at its next annual meeting.

Missing Out on Money Funds

Rolf Breuer, chairman of the supervisory board of Deutsche Börse AG, recently accused the Bundesbank of undermining Germany's financial attractiveness to foreign investors.

Mr. Breuer said the Bundesbank has done Frankfurt a disservice by seeking to limit the expected success of money market funds, which became legal on Aug. 1. The Bundesbank recently announced it would discontinue a kind of short-term government security in which the funds were expected to invest heavily in order to avoid encouraging a trend to short-term maturities.

The result is that German money market funds "will buy the short-term debt of the French government, the Belgian government, the Dutch government and every other government of this world, ultimately financing our European friends," he said.

There is "no rational reason" the Finance Ministry and Bundesbank should not help the short end of the German government debt market to develop, he said.

Brandon Mitchener

## U.S. Seeks 'Social Contract' To Upgrade Worker Skills

By Frank Swoboda  
Washington Post Service

WASHINGTON — Labor Secretary Robert B. Reich wonders if the cost of being economically competitive is too high if it means a reduced standard of living for middle-class Americans.

"The core meaning of competitiveness has got to be improved living standards for Americans," he said in a weekend interview. "If we have economic growth and most Americans don't enjoy it, we're not succeeding as an economy."

Mr. Reich is beginning a campaign for what he calls a "new social contract" between business, government and citizens to help millions of Americans in the "anxious class" survive in today's economic order of downsizing, re-engineering and global competition.

Mr. Reich plans to outline the government's position in three speeches, beginning with an address on the proper role of business to the National Alliance of Business in Dallas on Tuesday.

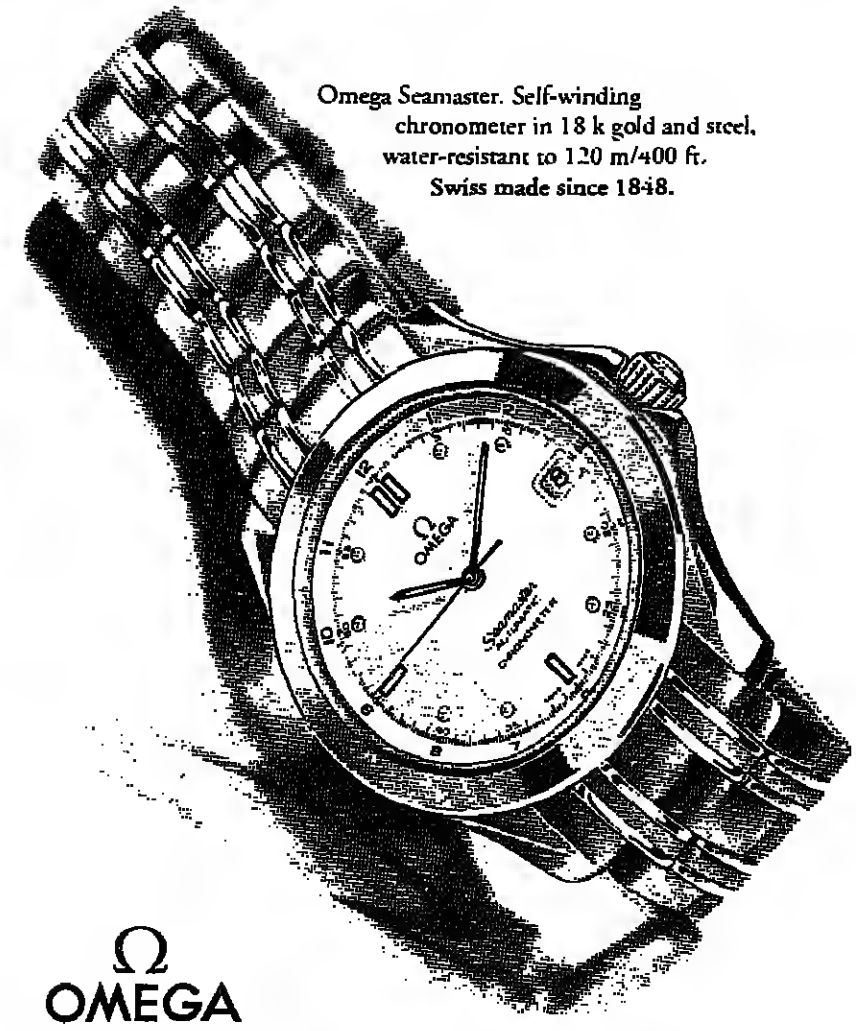
Certainly, not everyone is doing poorly in the current recovery. More than 2 million jobs have been created during the past two years, but 8 million are unemployed and 4 million others are working part-time but want full-time jobs.

Mr. Reich noted the paradox of an economy that has so many people unemployed while Wall Street frets about the possibility of inflation rising because of tight labor markets and a shortage of skilled labor.

He said the government would like to see companies within various industries share the costs of basic-skill training.

OMEGA

THE LINK BETWEEN THE PAST AND THE FUTURE



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OMEGA  
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L'ORÉAL

EXTRAORDINARY GENERAL MEETING

Further to the Board of Directors' press release of 18 August 1994, an Extraordinary General Meeting of Shareholders of L'ORÉAL S.A. was held at Clichy on Thursday, 22 September 1994, chaired by Mr. Lindsay OWEN-JONES, Chairman and Chief Executive Officer.

Having exceeded the quorum of a third of the shares with voting rights, the Meeting was able to vote on the proposed resolutions on the agenda.

The shareholders widely approved the proposed transfer by GESPAL to L'ORÉAL of shares representing 51.16% of the issued capital of COSMAIR Inc. USA and 29.63% of the issued capital of COSMAIR CANADA Inc.

NESTLÉ will now sell to L'ORÉAL, for cash, its remaining shares in COSMAIR Inc. USA and COSMAIR CANADA Inc. together with its shares in LORSA-FAGEL (Switzerland) and PROCASA (Spain).

L'ORÉAL will therefore own 100% of COSMAIR Inc. USA and LORSA-FAGEL, 72.63% of COSMAIR CANADA Inc. and 49% of PROCASA.

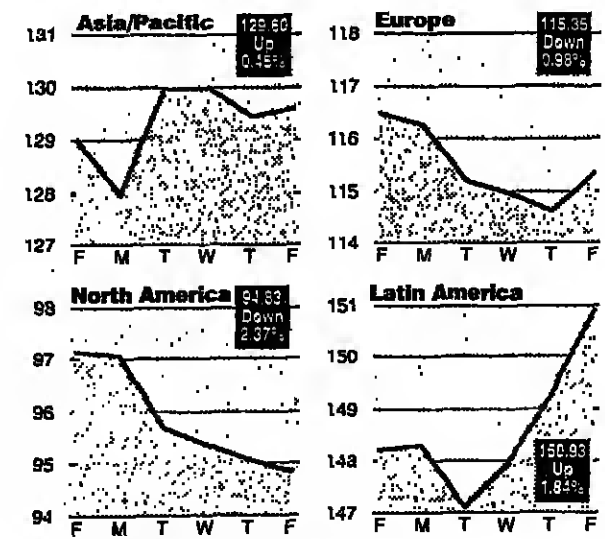
These acquisitions will provide a stronger basis for the Group's international development by reinforcing its positions in two of the major markets in the world, North America and Western Europe.

For further information, please consult your bank, stockbroker or financial institution as well as your usual newspapers. More details can be obtained by writing to the Business Information and Investor Relations Director, L'ORÉAL, 41 rue Martre, 92117 Clichy, France. Fax: (33-1) 47 56 80 02.

## THE TRIB INDEX

International Herald Tribune  
World Stock Index, composed  
of 200 internationally investible  
stocks from 25 countries,  
compiled by Bloomberg  
Business News.

Week ending September 23,  
daily closings.  
Jan. 1992 = 100.



Industrial Sectors/Weekend close

	9/23/94 close	9/19/94 close	% change		9/23/94 close	9/19/94 close	% change
Energy	112.16	116.20	-3.48	Capital Goods	117.29	117.88	-0.58
Utilities	131.30	130.18	+0.86	Raw Materials	134.83	137.75	-2.12
Finance	115.49	115.07	+0.36	Consumer Goods	103.17	104.33	-1.11
Services	120.95	121.97	-0.84	Miscellaneous	134.18	136.87	-2.04

The index tracks U.S. dollar values of stocks in: Tokyo, New York, London, and Argentina, Australia, Belgium, Brazil, Canada, Chile, Denmark, Finland, France, Germany, Hong Kong, Italy, Mexico, Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, and Venezuela. For Tokyo, New York and London, the index is composed of the 20 top issues in terms of market capitalization, otherwise the ten top stocks are tracked.

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## CURRENCY RATES

Cross Rates	Sept. 23
American dollar	1.72
British pound	1.78
Canadian dollar	1.50
French franc	16.50
German mark	1.75
Italian lira	2.00
Japanese yen	160.00
Netherlands guilder	2.20
New Zealand dollar	1.60
Portuguese escudo	200.00
Spanish peseta	166.64
Swiss franc	1.75
Swedish krona	1.00
Thai baht	50.00
West German mark	1.75
Yen	160.00

Closings in Amsterdam, London, New York, Toronto and Zurich, futures in other centers.

Source: Reuters. To buy one dollar: -- Units of 100; N.D.: not quoted; N.A.: not available.

## Other Dollar Values

Currency	Per \$	Currency	Per \$	Currency	Per \$
Australian dollar	0.75	Chinese yuan	8.27	Indonesian rupiah	1,700
Belgian franc	36.36	Hong Kong dollar	7.75	Israeli sheqel	1.80
British pound	0.65	Indian rupee	31.25	Japanese yen	160.00
Canadian dollar	0.70	Italian lira	2,000	Malaysian ringgit	2.36
Danish krone	6.46	Portuguese escudo	200.00	Norwegian krone	4.76
Deutsche mark	0.55	South African rand	6.60	Spanish peseta	166.64
French franc	6.55	Swedish krona	1.00	Swiss franc	1.75
Irish pound	0.78	Thai baht	50.00	Yen	160.00

Source: IMF Bank (Amsterdam); Indus Bank (Brussels); Banco Commerciale Italiana (Milan); Agence France Presse (Paris); Bank of Tokyo (Tokyo); Royal Bank of Canada (Toronto); IMF (SDR). Other data from Reuters and AP.



## WEEKLY INTERNATIONAL BOND PRICES

Provided by CS First Boston Limited, London, Tel: (071) 516 40 25. Prices may vary according to market conditions and other factors. Sept. 23.

## Dollar Straights

Issuer Cn Mat Price Yld

## Governments/Supranationals

Issuer Cn Mat Price Yld

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## New International Bond Issues

Compiled by Paul Floren

Issuer	Amount (millions)	Mat.	Coups.	Price	Price end week	Terms
<b>Floating Rate Notes</b>						
Nordbanken	\$100	2004	0.45	100	—	Over 3-month Libor until 1999, when issue is callable at par, thereafter 1.25 over. Reoffered at 99.25. Fees 0.67% (Denominations \$10,000, (Nemura Int'l))
Yasuda Trust Asia Pacific	\$100	2004	1/2	102	—	Over 3-month Libor. Maximum interest 10%. Fees 2% (Denominations \$10,000, (Nemura Int'l))
Alliance & Leicester Building Society	£100	1999	1/16	100	—	Over 3-month Libor. Noncallable. Fees not disclosed. (J.P. Morgan Securities)
Leeds Permanent Building Society	£100	1999	1/16	100	—	Over 3-month Libor. Noncallable. Fees not disclosed. (Denominations £100,000, (HSBC Markets))
<b>Fixed-Coupons</b>						
GMAC	\$200	1997	7 1/4	101.075	99.65	Reoffered at 99.95. Noncallable. Fees 1.96% (Swiss Bank Corp.)
Household Affinity Credit Card Master Trust 1	\$870	1999	7	99.28	—	Average life 36 months. Fees not disclosed. (Goldman Sachs Co.)
Toyota Motor Credit Corp.	\$300	1996	6 1/4	100.95	100.03	Reoffered at 99.95. Noncallable. Fees 1 1/4% (CS First Boston)
Trinidad & Tobago	\$150	2004	1 1/4	99.734	—	Semiannually. Noncallable. Fees 1%. Denominations \$10,000. (Cibank Int'l)
World Bank	\$1,500	1999	7 1/4	99.471	99.30	Semiannually. Noncallable. Fees 0.25% (Union Bank of Switzerland)
European Investment Bank	€100	1998	8 1/4	101	—	Reoffered at 99.65. Noncallable. Fees not disclosed. (HSBC Markets)
Holifax Building Society	£250	1997	8 1/4	100.515	—	Reoffered at 99.34. Noncallable. Fees 1 1/4% (S.G. Warburg)
Kobe City	€200	2004	9 1/4	99.45	—	Noncallable. Fees 0.325% (Union Bank Switzerland)
Nestle Holdings	€75	1997	8 1/4	101.087	—	Reoffered at 99.90. Noncallable. Fees 1 1/4% (J.P. Morgan Securities)
Argentina	m. 300,000	1997	13.45	100	99.13	Reoffered at 99%. Noncallable. Fees 1 1/4% (Chase Manhattan)
European Investment Bank	m. 200,000	1997	11.45	102	100.95	Noncallable. Fungible with outstanding issue, raising total amount to 700 billion lire. Fees 1 1/4% (Banca di Roma)
European Investment Bank	€300	1999	8 1/4	100.985	99.40	Reoffered at 99.36. Noncallable. Fees 1 1/4% (Swiss Bank Corp.)
Philip Morris Capital	€150	1998	8 1/4	101.35	100.10	Reoffered at 100. Noncallable. Fees 1 1/4% (Paribas Capital Markets)
Australian Industry Development Corp.	Aus 100	1997	9	100%	99.05	Noncallable. Fees 1 1/4% (Hombors Bank)
Commerzbank Overseas Finance	Aus 125	1999	10	101.90	99.85	Noncallable. Fees 2% (Hombors Bank)
Daiwa Int'l Finance (Cayman)	¥7,500	2004	5	100	—	Noncallable. Fees not disclosed. (Morgan Stanley Int'l)
Daiwa Int'l Finance (Cayman)	¥10,000	2004	5	100	—	Interest will be 5% until 2000, when issue is callable at 100, thereafter 5.30%. Fees not disclosed. Denominations 100 million yen. (Merrill Lynch Int'l)
Daiwa Int'l Finance (Cayman)	¥8,000	2005	5	100	—	Semiannual interest will be 5% until 1999, thereafter 5.28%. Fees not disclosed. Also 2.5 billion yen paying 5% until 1999, thereafter 5 1/2%. Denominations 100 million yen. (Solomon Brothers Int'l)
Daiwa Int'l Finance (Cayman)	¥15,500	2005	5	100	—	Interest will be 5% until 2000, when issue is callable at 100, thereafter 5 1/2%. Fees not disclosed. Denominations 100 million yen. (Merrill Lynch Int'l)
Misterio	¥10,000	1999	—	100.20	—	Coupon not disclosed. Noncallable. Fees not disclosed. Denominations 100 million. (Daiwa Europe)
<b>Equity-Linked</b>						
Telkom Malaysia	\$350	2004	4	100	—	Semiannually. Callable at par in 1999. Convertible at 23.40 (roughly) per share, a 10% premium, and at 2,553 (roughly) per dollar. Fees 2 1/4% (CS First Boston)
Yang Ming Marine Transport	\$160	2001	open	100	—	Coupon indicated at 1 1/4 to 2 1/4%. Redeemable in 1999 to yield 6.00 to 6.40%. Convertible at an expected 10 to 6% premium. Fees 2 1/4% Terms to be set Sept. 26. (Baring Brothers Int'l)
Uniden	¥10,000	1998	—	100	—	Semiannually. Noncallable. Convertible at 2,573 yen per share. Fees 2 1/4% (Daiwa Europe)

## Manufacturers Ask Fed Not to Raise Rates

By Louis Uchitelle  
New York Times Service

WASHINGTON — U.S. manufacturers, declaring that their businesses are prospering and their hiring is up, have urged the Federal Reserve Board not to raise interest rates again this year. They said higher rates would endanger their prosperity.

In taking this position on Saturday, shortly before Fed policymakers meet Tuesday to consider a sixth rate increase this year, the National Association of Manufacturers directly challenged a basic tenet of the central bank's policy.

While most Fed officials insist that rising inflation poses the greatest danger to the economy and should be prevented, even at the cost of an economic slowdown, the manufacturers take the opposite view. They prefer a little inflation, which gives them leeway to raise prices.

The association did not pass a formal resolution at a three-day meeting here, attended by 115 chief executives of compa-

nies ranging from giants as Boeing Co. and the Big Three automakers to small machine shops.

But the executives opposed a rise in rates in a poll taken at the meeting, part of the associa-

## U.S. CREDIT MARKETS

tion's effort to prevent a rate increase that might slow the economy and dampen its members' sales.

Summarizing the results of the poll, the president of the association, Jerry Jasinski, said Saturday, "The overwhelming majority believe that the Fed should hold interest rates at current levels or delay any further action until late this year or next year."

Stanley C. Gault, chairman of Goodyear Tire & Rubber Co. and a former chairman of the manufacturers' group, said: "We have to be particularly careful about what we do now. It is as hard or harder to reverse a slowdown in the economy as it is to reverse rising inflation."

The manufacturers rarely come out so publicly or bluntly against a rate increase. But this time, they said, an interest rate rise would catch them just as their sales are expanding, mostly from the ripple effects of strong home construction and surging auto and truck sales.

"Higher rates can create uncertainty, and this can get translated into procrastination and delay in making purchases," Mr. Gault said.

But even executives of companies removed from the auto and construction industries expressed concern about rates.

Lawrence W. Clarkson, a senior vice president of Boeing, for example, said higher rates might discourage people from buying airline tickets on credit, just as air travel was rising and airlines might be ready to order more new planes. "Leisure travel is very interest-rate sensitive," he said.

In their poll, the manufacturers rejected a main argument for a rate increase intended to reduce consumer demand, and with it economic activity, by discouraging borrowing in a nation that runs on credit.

The argument is that shortages of labor and of production capacity will force manufacturers to raise wages to obtain skilled workers and that the higher wages will force businesses to raise prices sharply.

"We have no strains on capacity, and there is certainly no strong demand for wage increases, said Tracy O'Rourke, the newly elected chairman of the association.

For his company, Varian Associates Inc., which makes machinery for semiconductor manufacturing, he said, "Our orders for this machinery will be up 100 percent this year, but every order is a dogfight over prices."

Expectations on Wall Street of a rate increase have played a role in the steady decline of stock prices in recent days and in the upward pressure on interest rates in the bond market.

The yield on the benchmark 30-year Treasury bond closed at 7.79 percent on Friday, up from 7.78 percent, as the price fell 47/32 point.

Pressure on bond prices also stemmed from the rising gold prices, which touched \$400 an ounce on Friday in New York, fueling inflation and rate concerns.

Citing surprising strength in the U.S. industrial sector, analysts on Friday said the Fed needed to deal with inflation pressures without delay and would raise the funds and discount rates by 50 basis points.

## Orders Soar In August For U.S. Tools

Bloomberg Business News

WASHINGTON — U.S. machine tool orders soared 80.5 percent in August from a year earlier, reflecting increased demand from major auto manufacturers to small and midsize factories, the Association of Manufacturing Technology said Sunday.

"The 1994 order total continues to move ahead of 1993," said Albert Moore, president of the association.

But orders declined 7.6 percent in August from July, the second monthly decline, as manufacturers shut down for summer vacation, the association said.

August machine tool orders decreased to \$327.45 million after declining 12.2 percent to \$354.25 million in July.

Economists monitor machine tool orders and shipments to gauge industrial output, consumer demand and business investment.

## SHORT COVER

## Israel Lifts Interest Rates

JERUSALEM (Combined Dispatches) — The central bank of Israel said Sunday it was raising its interest rates 1.5 percentage points to battle double-digit inflation.

For the second consecutive month, the government raised the basic lending rate to commercial banks by 1.5 percentage points, bringing the rate it will charge at monetary tenders in October to 15.5 percent.

It was necessary to raise interest rates because we have a heated economy," said Jacob Frenkel, a governor of the Bank of Israel. But some analysts said that monetary policy alone would not be enough to lower inflation, which is running at an annual rate of 14.5 percent.

(Reuters, Bloomberg)

## No Progress in Trade Talks

TOKYO (Reuters) — Japanese trade negotiators are privately pessimistic about the framework trade talks with the United States and think Washington will move toward sanctions, the Kyodo news agency reported Sunday.

The agency said it had obtained internal Japanese government papers that said officials thought the two countries were a long way apart on basic issues, making it hard to reach an agreement by a U.S.-imposed deadline Friday.

In Washington, Mickey Kantor, the U.S. trade representative, and Foreign Minister Yohsei Kono of Japan announced no agreement after talks Saturday on access to Japanese markets. But negotiators agreed to make a midweek attempt to resolve the dispute, even though few of them expected a breakthrough until closer to the deadline.

## OPEC Aims for \$18 to \$22 Oil Price

DOHA, Qatar (AFP) — Members of the Organization of Petroleum Exporting Countries should aim for a price of \$18 to \$22 a barrel over the next three years, the OPEC president, Abdullah Badri, said Sunday.

Mr. Badri, who is also the oil minister of Libya, did not explain why the price target differed from OPEC's benchmark price of \$21, set in 1990 but never reached because of the weak oil market. "OPEC countries respect their production quotas but the benchmark price is a long way from being reached," Mr. Badri said after a meeting with Abdullah Attia, the energy minister of Qatar.

## Coles Myer Wants to Cancel Stake

SYDNEY (Bloomberg) — Peter Bartels, chief executive of Coles Myer Ltd. said Sunday he wanted the company to cancel all the 276 million shares in his company formerly held by Kmart Corp.

Mr. Bartels told the Nine Network's Business Sunday program that his preference was "to cancel the stock, have the debt on the balance sheet and make sure everyone is focused on working for the good of the shareholders." Shareholders voted last week to approve a buyback of the 276 million shares, equivalent to 21.45 percent of the company's equity, formerly held by the U.S. retailer. Coles Myer will cancel almost half the newly acquired stake. It said last week that it was looking for buyers for the remaining 147 million shares. However, the company has said repeatedly that if it does not find any takers, it could cancel those shares too. Coles bought the 11.45 percent stake after Barclays De Zoete Wedd Australia was unable to find buyers prepared to pay 4.55 Australian dollars (\$3.36) each for the shares, which is what Coles paid Kmart.

## Pakistan Buys U.S. Power Plants

ISLAMABAD (Reuters) — U.S. businessmen signed agreements on Saturday for energy deals amounting to a \$4 billion investment in Pakistan.

The deals, signed during a visit by U.S. Energy Secretary Hazel R. O'Leary, included two power plants with a combined value of \$1.73 billion. Mrs. O'Leary, who headed a delegation of more than 80 business leaders, said the energy deals were a recognition of Islamabad's "revolutionary and profoundly deep" economic reforms.

## For the Record

British Telecommunications PLC and Tele Danmark are expected to announce a "significant international cooperation" agreement at a press conference on Monday. (Bloomberg)

Wharf Cable Ltd., the cable-television unit of Wharf (Holdings) Ltd. is to launch a 24-hour financial news channel in Hong Kong on Monday. (Reuters)

## DOLLAR: A Tough Week Ahead

Continued from Page 7

pointed," said Mark Cliffe at Midland Bank in London.

"A further decline in both U.S. bonds and the dollar could not be more badly timed from the perspective of Japanese investors," Mr. Cliffe said.

October is the start of the second half of Japan's financial year and is traditionally a busy month for buying foreign bonds, he said.

Joe Prendergast, an analyst at Paribas Ltd. in London, said that even a trade agreement was unlikely to lift the dollar.

The United States said last week that its trade deficit with Japan widened to \$5.67 billion in July from \$5.52 billion in June.

and accounted for half of the overall deficit.

Noting the expansion of the U.S. trade deficit with Japan, Mr. Prendergast said that "until there is some clear indication that the trade balance is actually turning, there will be limited confidence in the dollar's upside potential against the yen. As such, the sustainability of any dollar rally on a partial trade deal will be questionable."

His advice is to sell the dollar on any rally against the yen or the Deutsche mark. "The risk remains for a further blowout to the downside for the dollar versus the mark, though this will most likely have to wait until after the German elections on Oct. 16."

— CARL GEWIRTZ

## BONDS: A Pragmatic Solution

Continued from Page 7

the spread over the U.S. benchmark is likely to be 85 basis points — a level expected to attract yield-hungry investors.

Lebanon will offer its first issue this week, a three-year paper, expected to total at least \$200 million, will be priced to yield at least 325 basis points over benchmark rates.

## U.S. Fund Says Swedish Debts Pose Default Risk

Bloomberg Business News

STOCKHOLM — Moore Capital, a hedge-fund manager, has said Sweden's high state debt made it the most likely western European country to be unable to meet its debt payments.

"Sweden is the country in Europe that is running the greatest risk of being forced to stop its payments," Moore Capital wrote in an internal study on the Swedish economy, which was published in the daily newspaper Dagens Industri.

The budget deficit for the year ended June 30 was 181 billion kronor (\$24 billion), 11 percent of economic output. State debt is 1.29 trillion kronor, projected by the government to grow to 1.9 trillion by 1999, Moore said.

In July, Skandia Forsakrings AB said it had found no buyer state bonds until the government did something to tackle the debt. This month, the Vontobel fund of Switzerland said it was selling its Swedish bonds on concerns they would be downgraded.

Business Message Center every Wednesday

## Euromarkets At a Glance

Eurobond Yields

	5-yr	10-yr	15-yr	20-yr	30-yr
U.S. 5-yr	7.95	7.90	7.92	7.92	7.92
U.S. 10-yr	7.95	7.90	7.92	7.92	7.92
U.S. 15-yr	7.95	7.90	7.92	7.92	7.92
U.S. 20-yr	7.95	7.90	7.92	7.92	7.92
U.S. 30-yr	7.95	7.90	7.92	7.92	7.92
France 5-yr	6.24	6.14	6.24	6.24	6.24
France 10-yr	6.24	6.14	6.24	6.24	6.24
France 15-yr	6.24	6.14	6.24	6.24	6.24
France 20-yr	6.24	6.14	6.24	6.24	6.24
France 30-yr	6.24	6.14	6.24	6.24	6.24
Germany 5-yr	6.07	5.97	6.07	6.07	6.07
Germany 10-yr	6.07	5.97	6.07	6.07	6.07
Germany 15-yr	6.07	5.97	6.07	6.07	6.07
Germany 20-yr	6.07	5.97	6.07	6.07	6.07
Germany 30-yr	6.07	5.97	6.07	6.07	6.07
Italy 5-yr	6.14	6.04	6.14	6.14	6.14
Italy 10-yr	6.14	6.04	6.14	6.14	6.14
Italy 15-yr	6.14	6.04	6.14	6.14	6.14
Italy 20-yr	6.14	6.04	6.14	6.14	6.14
Italy 30-yr	6.14	6.04	6.14	6.14	6.14
Spain 5-yr	6.14	6.04	6.14	6.14	6.14
Spain 10-yr	6.14	6.04	6.14	6.14	6.14
Spain 15-yr	6.14	6.04	6.14	6.14	6.14
Spain 20-yr	6.14	6.04	6.14	6.14	6.14
Spain 30-yr	6.14	6.04	6.14	6.14	6.14
UK 5-yr	6.14	6.04	6.14	6.14	6.14
UK 10-yr	6.14	6.04	6.14	6.14	6.14
UK 15-yr	6.14	6.04	6.14	6.14	6.14
UK 20-yr	6.14	6.04	6.14	6.14	6.14
UK 30-yr	6.14	6.04	6.14	6.14	6.14

Source: Luxembourg Stock Exchange.

## Weekly Sales

	5-yr	10-yr	15-yr	20-yr	30-yr
Stratified	7,771.10	7,771.10	7,771.10	7,771.10	7,771.10
Convert.	358.10	358.10	358.10	358.10	358.10
FRN	5,892.50	5,892.50	5,892.50	5,892.50	5,892.50
ECU	4,022.80	4,022.80	4,022.80	4,022.80	4,022.80
Total	22,776.50	22,776.50	22,776.50	22,776.50	22,776.50

Source: Euroclear, Cede.

## Libor Rates

	1-month	3-month	6-month	1-year
U.S. 1-month	5.17%	5.17%	5.17%	5.17%
U.S. 3-month	5.17%	5.17%	5.17%	5.17%
U.S. 6-month	5.17%	5.17%	5.17%	5.17%
U.S. 1-year	5.17%	5.17%	5.17%	5.17%
France 1-month	5.17%	5.17%	5.17%	5.17%
France 3-month	5.17%	5.17%	5.17%	5.17%
France 6-month	5.17%	5.17%	5.17%	5.17%
France 1-year	5.17%	5.17%	5.17%	5.17%
Germany 1-month	5.17%	5.17%	5.17%	5.17%
Germany 3-month	5.17%	5.17%	5.17%	5.17%
Germany 6-month	5.17%	5.17%	5.17%	5.17%
Germany 1-year	5.17%	5.17%	5.17%	5.17%
Italy 1-month	5.17%	5.17%	5.17%	5.17%
Italy 3-month	5.17%	5.17%	5.17%	5.17%
Italy 6-month	5.17%	5.17%	5.17%	5.17%
Italy 1-year	5.17%	5.17%	5.17%	5.17%
Spain 1-month	5.17%	5.17%	5.17%	5.17%
Spain 3-month	5.17%	5.17%	5.17%	5.17%
Spain 6-month	5.17%	5.17%	5.17%	5.17%
Spain 1-year	5.17%	5.17%	5.17%	5.17%
UK 1-month	5.17%	5.17%	5.17%	5.17%
UK 3-month	5.17%	5.17%	5.17%	5.17%
UK 6-month	5.17%	5.17%	5.17%	5.17%
UK 1-year	5.17%	5.17%	5.17%	5.17%

Source: Libor Bank, Reuters.

**BusinessWeek**

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# Miracle Pass Cinches Victory For Colorado

**No. 9 Notre Dame 39, Purdue 21:** In South Bend, Indiana, Randy Kinder and Ray Zellers had career-high rushing days for the Irish. Kinder gained 143

Michigan's Tyrone Wheatley (6) ran for a touchdown, but Colorado prevailed, 27-26.

McElroy returned the opening kickoff 100 yards, and the Aggies won their 22d consecutive game at Kyle Field, now the longest home streak.

**No. 19 Southern California**  
**37, Baylor 27:** In Los Angeles, Shawn Walters ran for 207 yards and scored three touchdowns for Southern Cal. Rob Johnson

Fitzgerald rushed for a career-high 114 yards and two first-quarter touchdowns for the Wolfpack, to defeat the Division I-AA Catamounts.

# Rams Stun Chiefs, 16-0, Ailing Montana Subdued

end-around, but Chandler missed twice from the 5 and Zendejas came in to kick a 23-yarder with 1:17 still to go in the first period.

The Tribune, quoting a source, says that after considering a lockout, "probably an agreement is reached by then." The Tribune says in November.

... said the league was consid-  
eround Thanksgiving, if no agree-  
ment is made by the last Thursday

1. The first step is to identify the problem.

هكذا آمنه لأصل



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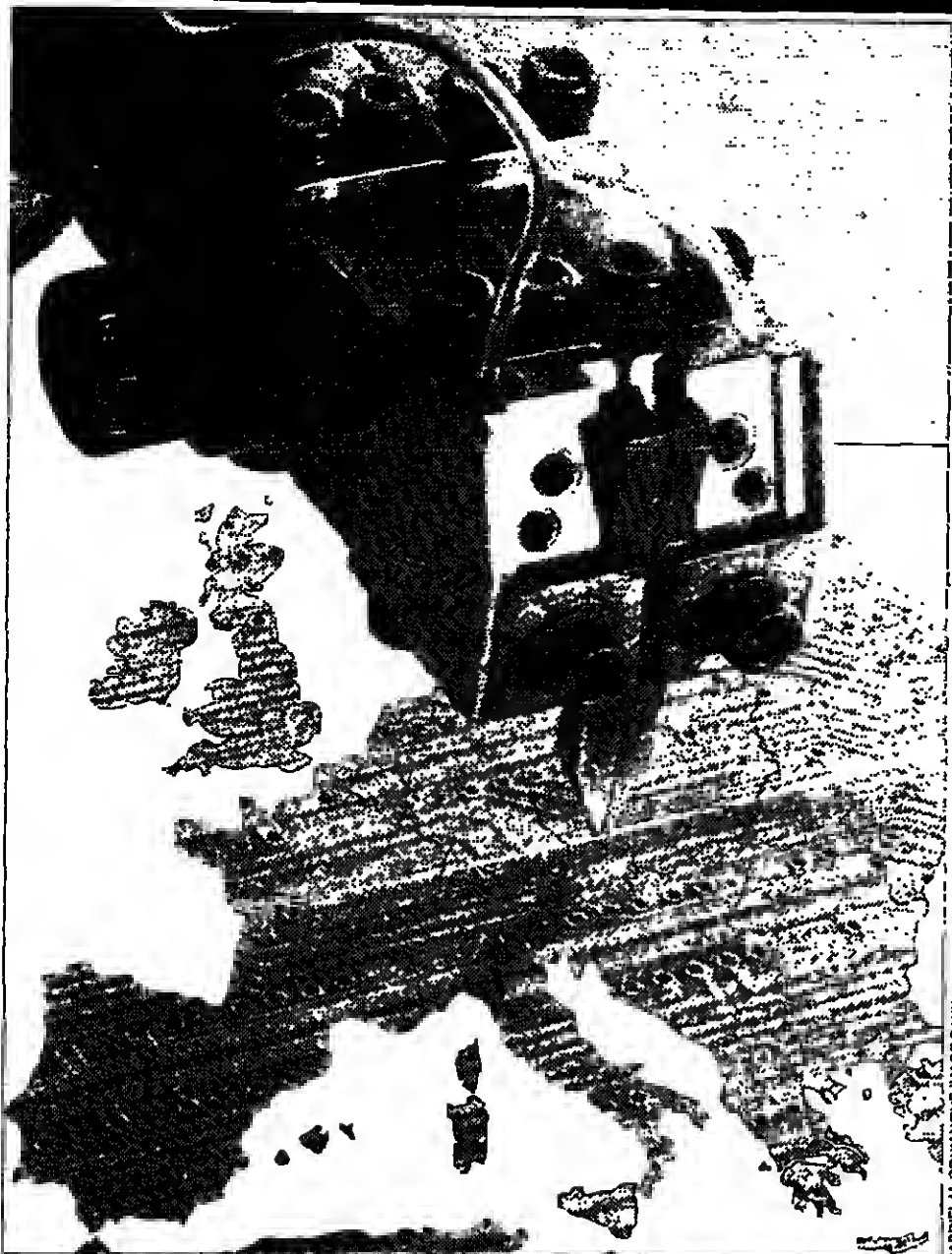
# MICROELECTRONICS



## Europe's Driving Force

### ADVANCED CHIPS PLAY IMPORTANT INDUSTRIAL ROLE

*Chips are the essential element in a wide range of products, from the computers of industry to the biosensors of medical technology.*



*Fixing a pattern for the Continent's place in the future.*

Today, any story about growth in European industry starts and ends with microelectronics. In 1993, the Continent's production of microelectronics components amounted to a reported \$15.4 billion.

The European producers' 25 percent rate of growth allowed them to maintain their 20 percent overall share of the explosively expanding world market, according to *Der Spiegel* magazine.

The Europeans' growth was strongest in sales of such high-end, high-margin items as megabit memory chips and ASICs (application specific integrated circuits), which meant that profits kept pace with turnover growth.

Advanced chips play an increasingly important role in the Continent's leading products: telecommunication devices, consumer equipment, automobiles, production facilities and environmental protection systems, which feature Europe's fastest rates of turnover and market share growth.

Telecommunications is on course to become the world's largest industry and the world's largest consumer of chips by 1998. With a 30 percent share, Europe is the world's largest producer of telecommunication devices and systems.

Microelectronics now account for 12.6 percent of the total value of the average telecommunication device produced in Europe, up 25 percent over three years.

More cordless telephones This rise has been caused by the proliferation of such advanced items as mobile telecommunication systems. Europe's production of cordless and cellular telephones has been rising at an annual rate of 60 percent. The amount of microelectronics going into these de-

vices has also been rising and now stands at 33 percent of total product value.

The growing consumption of chips by these leading-edge sectors will have direct consequences for Europe's microelectronics sector. Sales by Europe's chip makers are forecast to rise between 50 percent and 65 percent over the next few years.

Europe's automobile, chemical and steel-making industries are also very much part of this rush into microelectronics. In 1994, the average amount of mi-

croelectronics in a European-made car was 200 percent more than it was four years ago, and the projection for 1997 is for another 33 percent increase.

Close working relationship The statistics tell a clear and compelling story. One item they do not detail, however, is the change in the way microelectronics are incorporated into products.

"Today," says Jean-Philippe Dauvin, chairman of the World Semiconductor Trade Statistics organiza-

tion, "Europe's chip manufacturers design and produce with the particular needs of Europe's industrial companies in mind. In turn, these chip manufacturers are involved in Europe's industrial planning process from the start."

This hand-in-hand working relationship is a far cry from the situation a decade ago. In those days, any story about European industrial growth would have mentioned microelectronics in

*Continued on page 18*

### RESEARCH: ACADEMIC AND MARKETABLE

*Universities and nonindustrial organizations play a key role in experimenting with new processes.*

Research and development in microelectronics is conducted both by manufacturers (strongly focused on marketable end-product applications) and by universities and institutes sponsored by the European Union (favoring basic research, but also targeting the needs of small businesses with specific requirements).

The strategy of a company like Siemens AG reflects this general trend. "R&D in our company is very much oriented toward mainstream technology," says Hartwig Bierhenke, deputy director of Microelectronics Technology Research at Siemens Corporate R&D. "Each step forward is a process of evolution, not of revolution. Advances in technology have to be related to the last generation of research and development."

Mr. Bierhenke adds: "The semiconductor industry has to assume responsibility for progress in mainstream technology architecture because usually universities and other nonprofit organizations do not possess the resources to produce chips in volume." Nonetheless, the nonindustrial research organizations have a key role to play in experimenting with alternative chip production processes. "They can also work at the

front-end of physical principles, on simulation and on device physics," says Mr. Bierhenke.

The institutes can also fill a gap for small businesses. Lacking their own microelectronics resources, they need help in developing new working tools that require microelectronics.

Funding for microelectronics research in industry mostly comes from internal sources, but it also comes from European and national programs like JESSI, ESPRIT and so on. "But at Siemens, we accept outside funding only for topics that are positioned in our mainstream technology and only where we can identify an application. After all, we are a profit-making organization," says Mr. Bierhenke.

He stresses that at Siemens, as at other microelectronics manufacturers, R&D today is increasingly oriented toward marketable applications. "That is particularly true for semiconductors," he says, "where we have to look at the immediate potential use. Our priorities are the broadest range of integrated circuits for telecomm, computer, medical and consumer applications. With quantum field effect devices, for example, we are dealing with products that will be marketable after the year 2000."

Jack M. Gee

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## SIEMENS

### The Future in Focus with Europe in Mind

It was not so long ago that Europe had been written off. The Old World was outdated. The future seemed to be happening elsewhere.

We have always believed in Europa. Europe will emerge as a winner against international competition if it recalls its strengths and accepts this challenge with vision and courage.

From this conviction our new Microelectronics Center in Dresden has come into being - an integrated development and production facility e.g. for 64- and 256 Mbit-DRAMs.

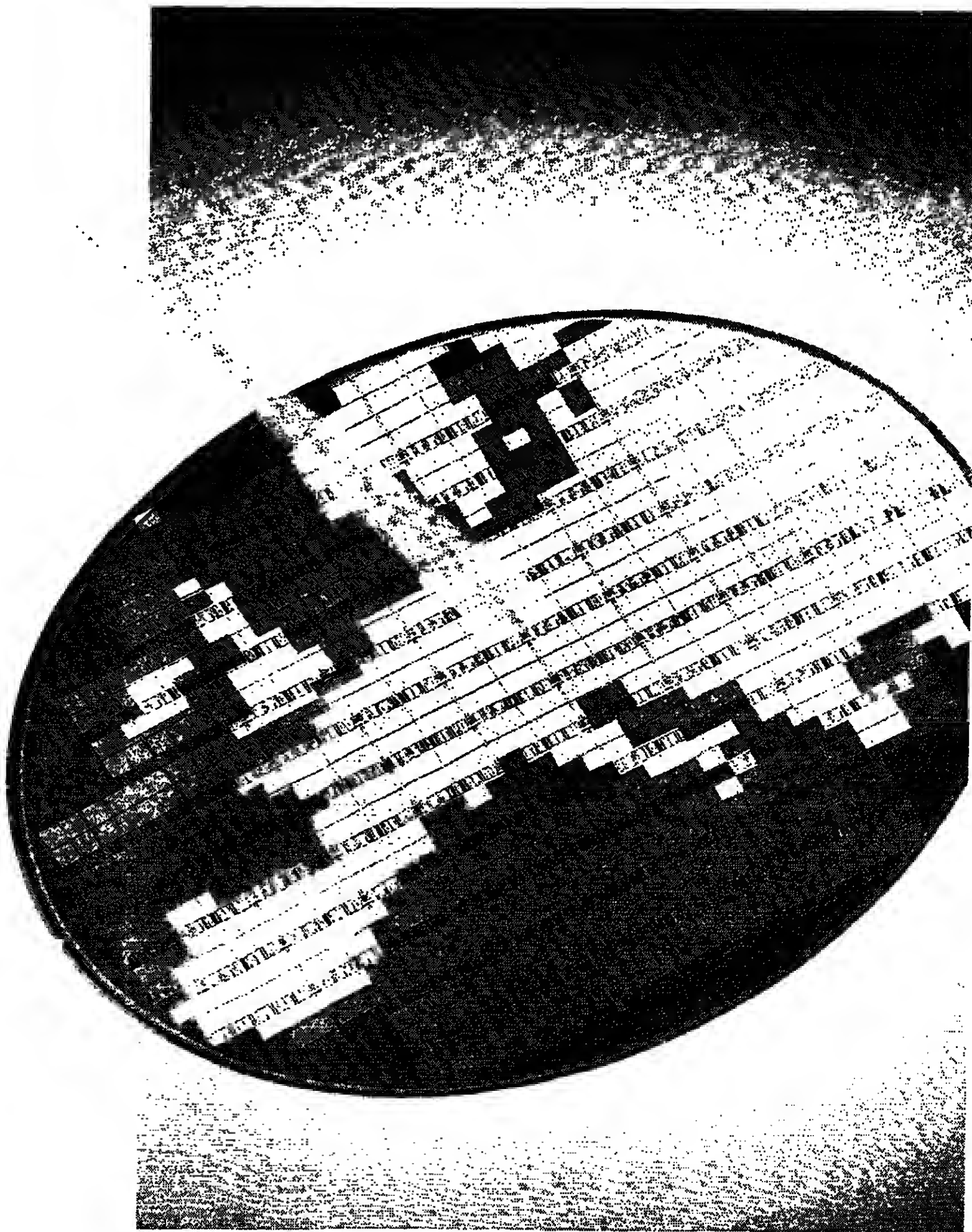


In Dresden, Siemens is establishing a "Center of Competence" where Quarter-Micron Chips will be manufactured well into the next millennium.

With the completion of this project - today the first one of its kind in Europe - we will exceed current boundaries in technology and in production, in cooperation with our partners, our suppliers and

customers, not to mention our financial commitment. This is a unique challenge, and our objective is a major one: to guarantee the supply of advanced memory- and logic ICs - from Europe for Europe - well into the next millennium. And, just as important, thereby safeguarding a piece of the future for Europe.

Global PartnerChip for Systems on Silicon.  
Siemens





## MICROELECTRONICS



The birth of a chip: a silicon ingot about to be sliced into wafers.

## CREATING MORE COOPERATION IN EUROPE

About 190 companies and research institutions run more than 70 projects.

JESSI's objective has always been ambitious: to establish and intensify the synergy between Europe's various microelectronics producers. While working toward this goal through the implementation of common strategies, it has generated advances in microelectronic manufacturing and equipment technologies, and user applications and interfaces.

JESSI has attracted a growing amount of corporate support. Currently, some 190 European and Europe-based companies and research institutes are providing JESSI's projects with personnel, research capacities and financial resources, all on a voluntary basis. This is 20 more than in 1993 and 120 more than in 1990, the first full year of operations for JESSI.

In a display of program

momentum, this increase in company numbers has been matched by that of JESSI's projects themselves. At the end of 1990, JESSI had 22 active projects and 1,300 man-years had been devoted to them during the year. By the end of 1994, the comparable figures will be 72 projects and 3,100 man-years.

## Record of results

The bottom line on any joint program is not the number of its participants and activities, however, but its results. This is where JESSI has especially distinguished itself. Nearly 90 percent of its project groups have achieved their objectives. They are now pursuing follow-up and spin-off technologies in the time remaining until December 31, 1996, when the project will come to its official end.



Heinz Hagmeister, chairman of the JESSI board.

Each month, these groups produce another spate of innovations bearing such names as "high precision optical wafer stepper," "common frames for CAE applications," "advanced thin film measurement systems for quality control," "multiple source 0.5 micron CMOS logic processes," and "automatic mixed signal VLSI testers." Nearly all of these have been quickly incorporated into standard corporate environments.

**Radical perception change** All of these achievements, in turn, have emanated from JESSI's first and most important accomplishment. Under its auspices, for the first time, Europe's microelectronics industry came together and took stock of itself as an entity.

This took place in the late 1980s. As JESSI Chairman Heinz Hagmeister remembers, it helped bring about a radical change in the industry's self-perception and operating procedures.

"Before European cooperation in multipartner projects such as ESPRIT got off the floor, the Continent's microelectronics companies

were well aware of the threats from without, from their rapidly developing competitors in Japan and the United States," says Mr. Hagmeister, who became the organization's chairman in 1993, capping a 35-year-long career in the semiconductor business. "They were not aware of their strengths from within, of the collective breadth and depth of Europe's microelectronic expertise — at least not until they all sat down together and started exchanging findings and plans. And this exploration got an extra dimension when the JESSI process began."

## Agenda for action

Issuing from this initial period of consultation was a 1,000 page agenda for technological action in Europe's semiconductor sector, published as JESSI's "Green Book." In addition to financial support supplied by the companies themselves, funding for the implementation of this agenda came from the European Union and the governments of Germany, France and other countries, using the transnational EUREKA research framework. JESSI became EUREKA project 127.

The real benefits to Europe's microelectronic manufacturers started manifesting themselves once the program partners got down to work in their laboratories and development centers.

It proved to be a highly productive enterprise. "Before JESSI, Siemens, SGS-Thomson, Philips and JESSI's other companies, as well as competitors, kept jealously guarded innovations and secrets from each other," Mr. Hagmeister says.



## Automotive Electronics

Cars are getting smarter every day. Microchips routinely control anti-lock braking, engine management, and other sub-systems, but until recently, they have not been able to accept master systems to control the car's overall operation. Now JESSI is contributing to the development of an integrated control unit for safety, engine, and other systems that will give the EU automotive industry a new edge.

Despite its tiny size, the controller-on-a-chip will allow car designers to link hundreds of points and simultaneously manage everything from the vehicle's headlights and tail lights to its fire systems and engine emissions.

The position of the European microelectronics industry is strong, with the European community among the world's top 10. JESSI's agenda is to consolidate this leadership position, with a focus on the micro controller, using 0.5 micron technology in 1991. Today's version uses 0.5 micron technology, and the project aims to move to 0.35 micron technology, by 1995.

S.B.

## VIEWS FROM THE BOARDROOM

Pasquale Pistorio is CEO of SGS Thomson Microelectronics.

No advanced industrial society can exist without controlled access to an advanced electronics industry. And an advanced electronics industry cannot exist without controlled access to an advanced semiconductor industry.

Innovation is a common priority in Europe. JESSI addresses that need. JESSI has produced results that have been immediately perceived. These results are so outstanding that there cannot be any debate about JESSI's success.

JESSI is not a cure-all remedy. It plays an essential role in pulling together

European resources, sharing know-how and creating confidence between partners. However, a single Japanese company has been spending at least 20 percent more on semiconductor research than JESSI in the entire microelectronics sector. Through public support, JESSI helps European companies carry out costly, high-risk, collaborative research whose benefits will not be limited to the companies taking part in the program.

With the enormous increase in R&D costs and investment needed for competitive industrial production, control of micro-

electronics is beyond the reach of most individual companies in this sector. We must persevere in creating strategic alliances, preferably, but not exclusively with European partners. Horizontal alliances between semiconductor manufacturers allow resources to be used more efficiently and provide economies of scale.

To realize semiconductor for new and complex systems calls for a completely new way of looking at the design of semiconductor devices. To achieve this, we have to learn to work alongside our customers. We have to go beyond the tradition-



al customer-supplier relationship achieved in Application Specific Integrated Circuits. The design cycle has to be a joint venture from the word go. Users have to be willing to say where they are heading not just today, but tomorrow and the day after. And that same level of trust will also be required from the semiconductor manufacturer.

er," Mr. Hagmeister says. "Their new day-to-day working contacts have not only generated the synergies and developments making JESSI a success, but have also engendered a new atmosphere of trust and an appreciation of the sometime competitor's capabilities."

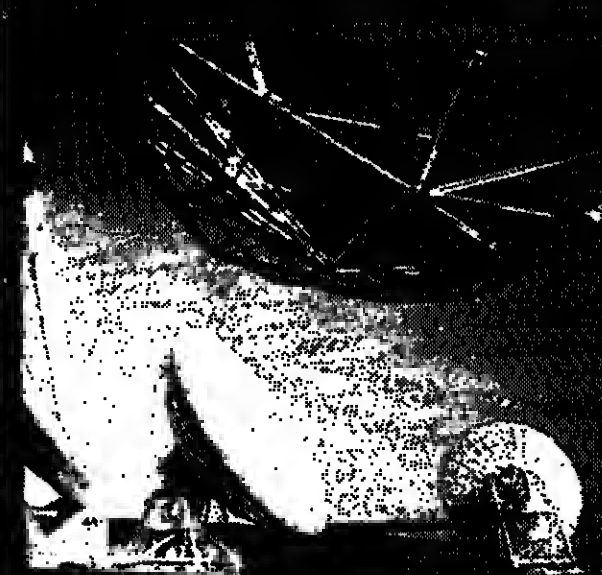
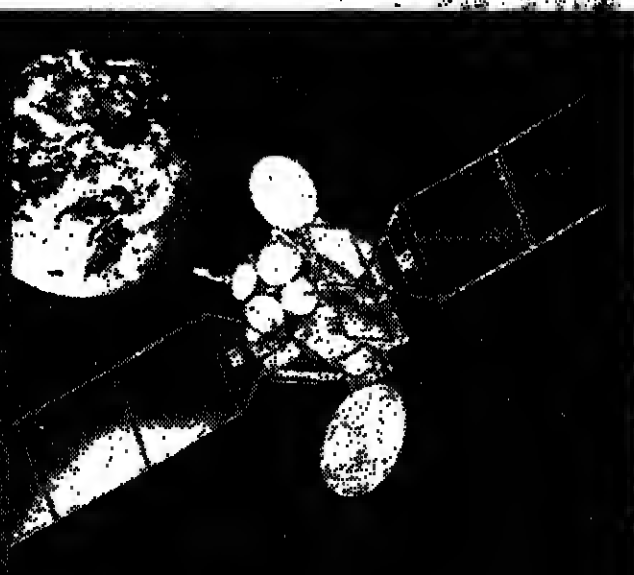
## Role model in Europe

"Among the results of all this," says Hans R. Meyer, JESSI's office director, "have been a slew of intra-European alliances, technology partnerships and supplier-purchaser arrangements. Today, when a European chip-manufacturer is looking for a partner, it looks

first in Europe, at its JESSI partners, and that's an important difference." JESSI's success has made it something of a role model for other European programs, says Guy Dumas, the organization's vice chairman. "JESSI is sort of a mini-EU," he says. "It's a perfect democracy. Decision making is by consensus. Despite this lack of centralized authority, the program is progressing well, and scientists and executives from so many different national and corporate cultures are working so efficiently together, which bodes well for other organizations of this scope."

## "MICROELECTRONICS"

was produced in its entirety in the Advertising Department of the International Herald Tribune. Writers: Steven Bartlett and Jack M. Tierney based in Paris, Terry Swartzberg in Munich and James Geary in Amsterdam. Program Director: Bill Mahoney.



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# M I C R O E L E C T R O N I C S

## TECHNOLOGY MOVES FURTHER INTO EVERYDAY LIFE

Boundaries are disappearing between cable, satellite and commercial broadcasting — and between office computers and television sets.

Actions speak louder than buzzwords in the microelectronics industry, but coining an entirely new term remains the best way to express what lies ahead.

"Next year we will probably overtake the Japanese," says Jean-Philippe Dauvin, chairman of the World Semiconductor Trade Statistics organization, citing the European electronic equipment industries' \$170 billion total output. At present, most of this equipment is loosely linked to a distinct market segment, such as the computer, telecom or consumer businesses. The traditional division between personal and professional applications has practically vanished. A new jargon is needed to describe the developments now under way.

During the early part of the 1980s, microelectronics was still primarily associated with mainframes, robots, personal computers, aerospace, defense and other es-

entially professional applications. The major exceptions to this rule — the consumer color television and the VCR — accounted for around 20 percent of the industry's production. But if current trends hold, around 60 percent of the industry's production will soon be destined for the general consumer.

Terms such as "information superhighway" not only dramatize the convergence of telecom and computer technology, but also reflect the breakdown of traditional divisions elsewhere: between cable, satellite and commercial broadcasting; between the many other types of information networks available to business and private subscribers; and between the office computer and domestic television.

Nomadic means smaller. With mobile communications, consumers have also entered the age of the no-

madic application. Like the hand-held phone, the personal digital assistant proves the microelectronics industry's golden rule: things get smaller. Fifteen years ago, the pocket calculator was considered to be a breakthrough. Today's state-of-the-art equipment crams a screen, computer and communications link into the same space. As multimedia takes off, the makers will probably add a television and mini CD players as well.

The automotive industry provides an example of the way a once distinct niche has appropriated a more generalized microelectronics-based future. Between 1990 and 1995, because of a clutch of new applications — some essential for the performance of the car — the value of the semiconductor content of new vehicles will have climbed from \$40 to around \$100.

The smart card — a small plastic card with a microprocessor embedded in its surface — is also getting smarter. New applications range from the German bid to use it as an identity card to the mobile phone operators' initiative to use it for storing subscriber information. By 1998, Europe will probably account for 80 percent of the cards' \$1.2 billion market. Anton Sauer of Siemens Nixdorf AG, who is chairman of the JESSI Subprogram Board on Applications, points out that even the term microelectronics is no longer strictly applicable. In 1991, when the state of the art was 1 micron, JESSI went submicron with its program for 0.7-micron technology, and it plans to halve the size again, down to a 0.3-micron scale, by 1997. "We are seeing the emergence of a whole array of new products and applications that will determine the industry's future over the next five to 10 years," says

Jim Eastlake, senior Dataquest analyst. "Increased miniaturization is making them feasible, and the system-on-a-chip concept is making them affordable."

Affordable is always a relative term. In general, as the rate of new-product launches increases, so the life expectancy — and price — of the products comes down. This trend risks locking the competing vendors into an inexorable cycle of escalating development and marketing costs.

As a result, the triangular relationship between technology, industry and market has undergone a fundamental shift.

"The equipment makers are still the experts in packaging and distribution, but now that the industry has moved forward from building bricks to creating complete systems on a chip, the technology is getting closer and closer to the finished product," says Douglas Dunn of Philips International Semiconductors.

**Largest in manufacturing**  
In 1993, semiconductors accounted for an estimated 11 percent of equipment value. In the early 1980s, the figure was between 6 percent and 7 percent. By the year 2000, it will probably exceed 15 percent, making electronics the largest single manufacturing industry in Europe.

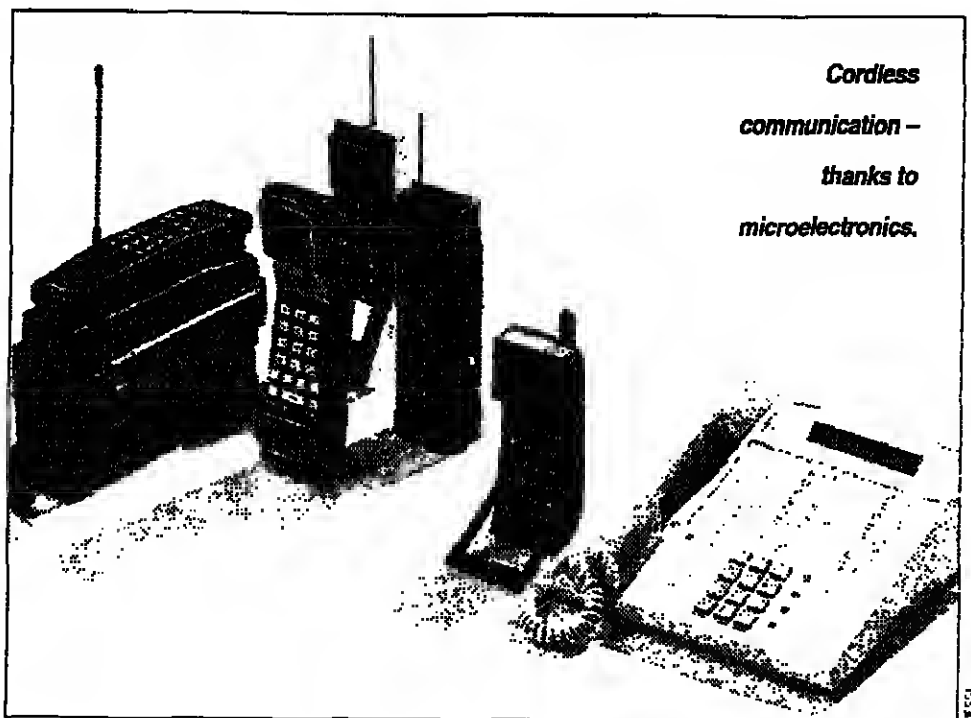
Trend spotters highlight the importance of relative equipment values by comparing the semiconductor content cost and market growth rates in the color television category (which scores 5 percent on both counts) and the fast-growing multimedia or cellular radio markets (where the figures run between 35 percent and 40 percent).

Market projections are perhaps a less reliable guide. But there is no denying the

connection between semiconductor technology and the \$200 million market for portable computers, a specialized niche that is expected to grow more than 50 percent by 1997; or the \$400 million market for video conferencing, which the pundits predict will top \$1 billion by 1997; or high-speed networks, a market with \$1 billion potential.

Microelectronics, however, is all-pervasive. It has made possible the medical scanner, personal computer, electronic notebook and compact disc, but it has also spawned the singing birthday card, electronic door lock and talking doll. Somewhere between these two extremes, the digital watch, electronic keyboard, reflex camera and pocket calculator are now taken for granted by an entire generation.

"The market is infinite, but unpredictable," says Mr. Dauvin. "All we really know



Cordless communication — thanks to microelectronics.

is that so far our forecasts have been wrong. The falling costs of semiconductor functions, at over 30 percent per annum, combined with a continuous increase in their performance levels,

produces unimaginable consequences."

Still the industry grows, and the product size shrinks. "Things will continue to get smaller and smaller until we reach the size of atoms

and run into the limits of physics," says Jim Eastlake, recalling the industry's golden rule. The term to remember: nanometers, or the 1,000th part of a micron. Steven Bartlett

### Mobile Radio

Personal communications is a key growth sector for the telecom industry, which expects to have more than 20 million European subscribers for the Global Mobile Communications System (GSM) by the year 2000. In many ways, GSM is only the beginning — after the pocket phone there will be the pocket computer, personal assistant and multimedia playing. ASICs (Application Specific Integrated Circuits) have a vital role to play in all these developments. Without such complex components, for example, it would be impossible to produce the multi-featured, pocket-sized portables that today's consumers demand. Power consumption is also a vital factor — the tiny integrated circuits consume very little power, so the product's batteries last a long time, and the power consumption will drop even further because even smaller transistors are being used. A chip based on 0.5-micron technology, for example, needs about twice as much energy as the next (0.35-micron) generation. Driven by considerations like these, which carry important implications for many other sectors, JESSI is continuing to demonstrate how beneficial smaller dimensions are.

### VIEWS FROM THE BOARDROOM

Jörgen Knorr is chairman of Siemens AG's semiconductor group.

JESSI was created by Europe's microelectronics industry to solve two inter-related problems specific to the industry: It had fallen behind in technologies applied and volumes of components produced. JESSI has alleviated these problems. In doing so, it has helped give its major participant companies international technological credibility. What this means for Siemens: we've been accepted as an equal in the "club of global players."

As a result, we've been able to enter into partnerships with other major international companies in such leading-edge projects

as the development of the 64 megabit chip.

It's been often said that, since the microelectronics business is increasingly application-driven, chip end-users have to be an integral part of the pan-European R&D planning process. I subscribe to that view. But another factor, of equal importance, has to be considered. Communication networks, for instance, are assuming an increasingly large share of the market for microelectronics components. These networks, by their very nature, link large numbers of participants and devices. For that reason, these markets — for

data communications, voice telephony, interactive television, whatever — can't "make" themselves alone.

What I mean is this: strong demand for certain products and services is one important prerequisite of these emerging markets. The other is the presence of common standards, certification procedures, specifications and regulations. These are created through negotiation and development on the official and industry-wide levels and involve such participants as federal ministries, national telecommunication authorities and the like. In addition, the setting up of these



systems often involves large quantities of capital expenditure and creates quite a few jobs. For these reasons and in view of these stakes, it is essential that the governmental sector — the "managers" of these markets — be included in the microelectronics research planning process.

# Service and Technology

**SGS-THOMSON**  
The SGS-THOMSON Service and Technology

United Kingdom, Austria, Brazil, Canada, Denmark, Finland, Germany, Hong Kong, India, Japan, Korea, Malaysia, Morocco, The Netherlands, Singapore, Spain, Sweden, Switzerland, Taiwan, Thailand and the USA



## M I C R O E L E C T R O N I C S

## Chipping Away

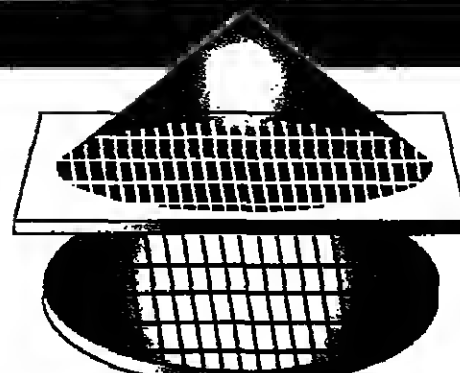
Though the making of integrated circuits varies from one producer to another and from one application to another, nearly all IC's involve the following eight steps.

## 1 WAFERS

Silicon is the basis for most integrated circuit technologies. Atoms of high-purity molten silicon attach to small seed crystal, forming a single crystal ingot. Each ingot is then sliced into wafers of uniform thickness.

## 2 THIN OXIDE LAYER

Silicon dioxide is thermally grown on the wafer. This layer, which does not conduct electricity, can be as thin as 50 atoms.



## 3 PHOTOLITHOGRAPHY

A photosensitive material (photoresist) is spread evenly over the wafer surface. A wafer stepper projects a pattern of circuit components and their interconnections through a mask onto the wafer. The exposed pattern is "developed" in a chemical reaction.

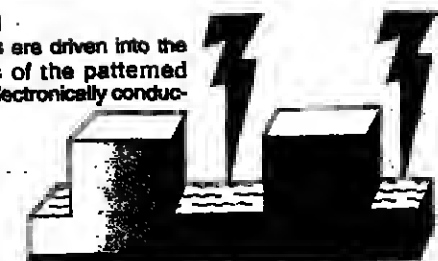
## 4 ETCHING

Reactive gases etch away the exposed areas to create a dimensional pattern on the wafer surface. The photolithography and etching stages are repeated up to 20 times so as to define the patterns of the various layers of conducting and non-conducting materials.



## 5 IMPLANTATION

High-energy ions are driven into the exposed areas of the patterned wafer to create electronically conductive regions.



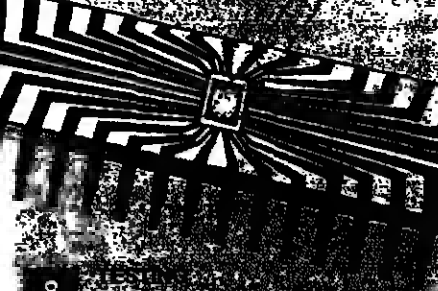
## 6 METALLIZATION

Thin metal layers interconnect the transistors to form the chip.



## 7 PACKAGING

The wafer is "diced" into individual chips.



## PROVIDING THE TECHNOLOGY FOR APPLICATIONS IN THE MARKET

Integrated circuits based on leading-edge research are combined with advanced, high-volume manufacturing methods.

In 1993, the global market for integrated circuits grew by some 30 percent, to a total volume of \$70 billion. Of this figure, CMOS technology devices comprised 77 percent of the integrated-circuit product range. (CMOS is short for Complementary Metal Oxide Semiconductor.) These statistics indicate the strategic importance of this technology to the future of the European microelectronics industry.

To capitalize on this burgeoning market, the JESSI Technology Subprogram focuses on the development of basic technology, advanced products and flexible manufacturing methods for the cost-effective, high-volume production of advanced integrated circuits. To this end, the Technology Subprogram is concentrating on two major areas: technology for the production of highly integrated CMOS logic circuits and competitive, high-volume manufacturing methods.

## Joint logic technology

As minimum integrated-circuit feature sizes continue to dwindle, existing processing techniques will be pushed to their physical limits. At some point, new technological breakthroughs will be required to realize the next generation of microelectronic devices. JESSI's advanced CMOS cluster is busy preparing the basic know-how necessary to achieve these breakthroughs.

CMOS technology, the method of choice for the production of integrated circuits with a high complexity and/or

low power consumption, is currently being developed for processes with several options, such as low supply voltage, embedded memories and analogue functions. As part of the JESSI Joint Logic project, this program aims to provide European manufacturers with leading-edge CMOS technology for the design and manufacture of innovative microelectronic systems.

The Joint Logic project has brought together the resources of two internationally renowned research institutes and seven major European integrated circuit manufacturers, with the latter group collectively representing some 10 percent of global semiconductor production. In this way, JESSI hopes to speed up development by facilitating close cooperation between partners, thus shortening the R&D learning curve. Together, the project collaborators have developed new generations of CMOS logic processes characterized by ever smaller dimensions, larger diameter silicon wafers and advanced manufacturing techniques.

The Embedded Memories project deals with data storage, the most frequently used function in modern electronics.

The objective of these JESSI projects is to enhance Europe's ability to incorporate high complexity functions in advanced silicon integrated-circuit designs.

The technology developed will serve as a basis for the development of logic and analogue CMOS devices for a

broad spectrum of industrial applications.

**Technology for volume production**  
The project objective is to develop and master CMOS technology with features sizes down to 0.35 microns, which is needed for the production of high-complexity memories.

Memories are the most frequently used integrated circuits. The worldwide IC product catalogue has about 40,000 product types, and a couple of hundred memory types serve more than 25 percent of the total IC market. These are high-volume items, made in the most advanced processes.

The activity includes new circuit development, reliability testing, mask making and packaging technology. These new memory types will be produced on 200-millimeter wafers, the largest wafer size available today.

JESSI deals with development aspects of both volatile memories, in the form of DRAMs (dynamic random access memories), and non-volatile memories, in the form of EPROMs (electrically programmable read-only memories) and EEPROMs (erasable electrically programmable read-only memories). The volatile memories lose their information when the power supply is switched off.

## DRAMs

In DRAMs, the information is stored in the form of a tiny charge sitting on a capacitor. This charge leaks away, and

the memory must be refreshed several times per second, an action which updates the information. The capacitor design is a crucial aspect in DRAM development.

DRAMs are the workhorses of the industry. The main memories of most computers are made with DRAMs.

## EEPROMs

Since their introduction in the late 1970s, EPROMs and EEPROMs have become essential parts of almost all electronic equipment. EEPROMs are more complex than EPROMs and can be found in consumer, automotive and telecommunications applications.

Flash EEPROMs have recently emerged as the new stars in the field of advanced memories. Highly application-driven, Flash EEPROM development is expected to support a diverse range of new dedicated high-volume applications in computers, peripherals, automotive control systems and telecommunications. For participants in this JESSI program, Flash memories present both significant market opportunities and major technological challenges. Some of the results achieved in the field of high-complexity EPROMs and Flash EEPROMs have already reached the market.

## Manufacturing science

The manufacturing competitiveness of the European semiconductor industry in the 1990s is based on high-volume submicron production. The JESSI

manufacturing engineering projects are therefore geared to developing practical solutions for the efficient production of integrated circuits with submicron feature sizes. In this way, JESSI will enable integrated-circuit manufacturers to meet the often conflicting requirements of process performance, manufacturing flexibility and cost-effectiveness. These objectives can only be achieved by closely integrating production factors such as technology, equipment facilities, materials handling and automation.

The integrated circuits of the future will be characterized by increasing complexity, higher power consumption and larger chip surface areas. But increased electronic systems performance is supported by improvements in chip packaging technology. Packaging has thus become an essential strategic part of all advanced electronic systems. The objective of this JESSI program is the development of the mounting, interconnection and packaging techniques necessary to meet the needs of future chip generations. Project activities are directed toward the development of a silicon substrate to accommodate several chips and the refinement of existing technologies for the packaging of single chips. By pioneering advances such as these, the JESSI Technology Subprogram has been instrumental in bringing the right technology to the market at the right time.

J.G.

## BUSINESS DIVISION SEMICONDUCTORS WACKER

Dataprocessing  
Telecommunication  
Consumer electronics  
Industrial electronics  
Transportation

Examples for the pervasive power of microelectronics

## Silicon

is the indispensable base element for all these applications.

A growing worldwide market for electronic equipment, amounting to 700 Billion US\$ in 1993, owes its existence to the availability of semiconductor devices built on hyperpure silicon wafers.

## WACKER

is the world's largest manufacturer of hyperpure polycrystalline silicon, the base material for silicon wafers.

WACKER is also one of the leading suppliers of wafers to the world's semiconductor industry.

Convinced that alliances represent an excellent way of implementing development results into mutually beneficial supplier-user relationships, WACKER contributes to the JESSI program in the field of silicon materials.

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## SPONSORED SECTION

## M I C R O E L E C T R O N I C S

BUILDING EXPERTISE  
INTO AN INDUSTRY  
ABLE TO COMPETE

Crucial role played by equipment and materials.

A broader and technologically more advanced equipment and materials sector is necessary if the competitiveness of the European electronics industry is to be advanced. JESSI has therefore devoted a significant part of its attention and budget to the European E&M industry.

## Silicon wafers

Semiconductors are etched onto thin disks made of silicon — silicon wafers — and then cut into chips that are mounted in a package to make the well-known "integrated circuit," or IC. Silicon is the basis for all emerging integrated circuit technologies and is of crucial strategic importance to the microelectronics industry.

As silicon is made of sand, the basic material is abundant. The problem is to put more transistors onto one wafer. Wafer size has gone up from less than 1 inch at the start, to 8 inches now and to probably 12 inches in the future. And transistors have become smaller, from 40 microns at the beginning to 1.1 micron now. This tremendous increase in productivity means that the material used and the production techniques must be of ever-higher quality.

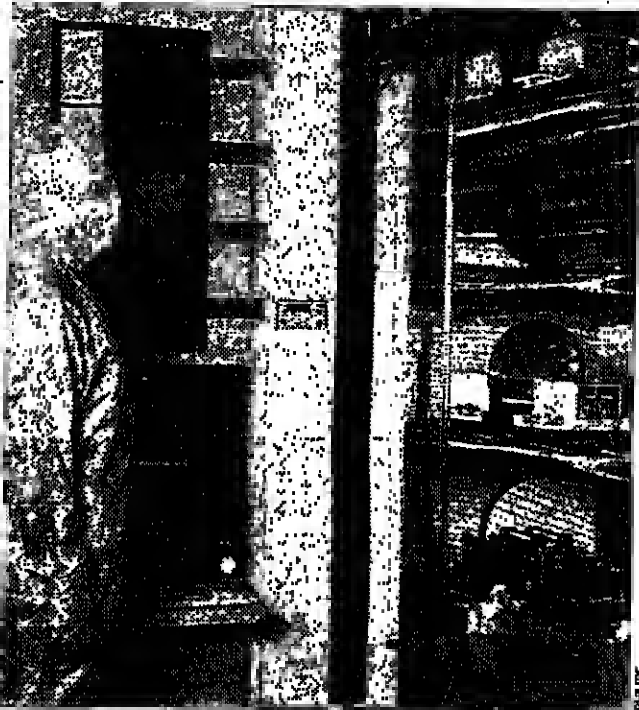
different phases to increase pattern contrast on a silicon wafer. Phase shift masks applied during wafer exposure achieve maximum edge definition and resolution enhancement.

This technology can double the resolution for line-space structures, improve process latitude by 40 percent and extend the lower limits of optical lithography. This postpones the need for expensive alternative technologies.

In order to ensure the availability of phase shift masks, this JESSI project is creating a European capability for the commercial production of these devices.

## The deep-UV stepper

As optical lithography technology continues to advance, it has become clear that current i-line techniques for some processing will eventually have to be completely replaced by deep-ultraviolet lithography. To pave the way for this transition, this JESSI project has initiated significant changes throughout the entire optical path. DUV lithography is now able to improve the quality and overall accuracy of the micro-image, reduce the number of defects, and speed turnaround times.



Protective clothing is for the chip as much as the chip.

## The i-line stepper

i-line steppers (using a particular line from the light mercury-spectrum) are used to meet the increasingly stricter demands made by advanced integrated-circuit processes. (Deep ultraviolet wavelengths are used in the next generation.)

Emphasis is placed on the mechanical positioning and optical performance of the stepper (a type of precise projector that projects images of the chip layers onto the wafer).

A JESSI project has developed a new generation of i-line steppers designed to improve off-axis illumination, reduce distortion, increase reliability and enhance productivity. Further improvements will facilitate the use of optical lithography for processes requiring more critical details.

## Phase shift masks

Phase shift technology makes use of the interference between light waves of

## E-Beam metrology

The overall objective of the JESSI Electron beam (E-beam) Metrology program is to provide the European microelectronics industry with a scanning electron microscope metrology station capable of monitoring structures in the factory environment.

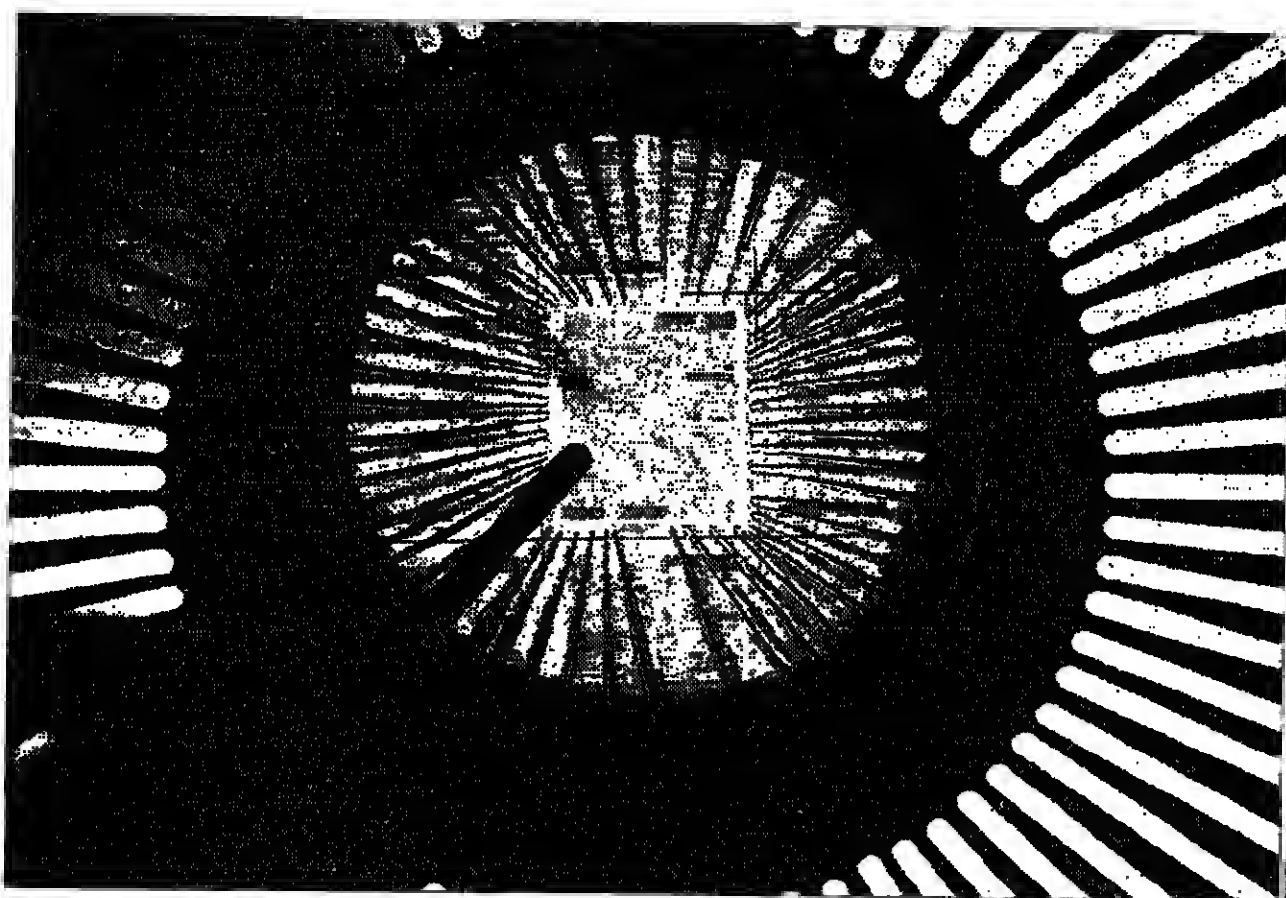
This system will have a throughput factor three times that of equipment currently in use, and it will reduce contamination and provide technological spin-offs into related areas.

## Cluster tools

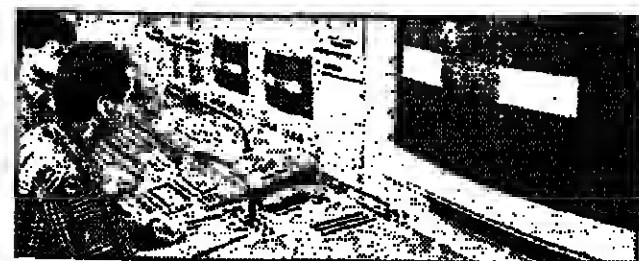
The Cluster Tools program concerns the physical combination of several process modules into a single piece of equipment.

Taken together, these JESSI E&M projects build upon existing European expertise to ensure the viable and economical production of semiconductors into the 21st century.

James Geary



Testing, one of the last steps in making an integrated circuit.

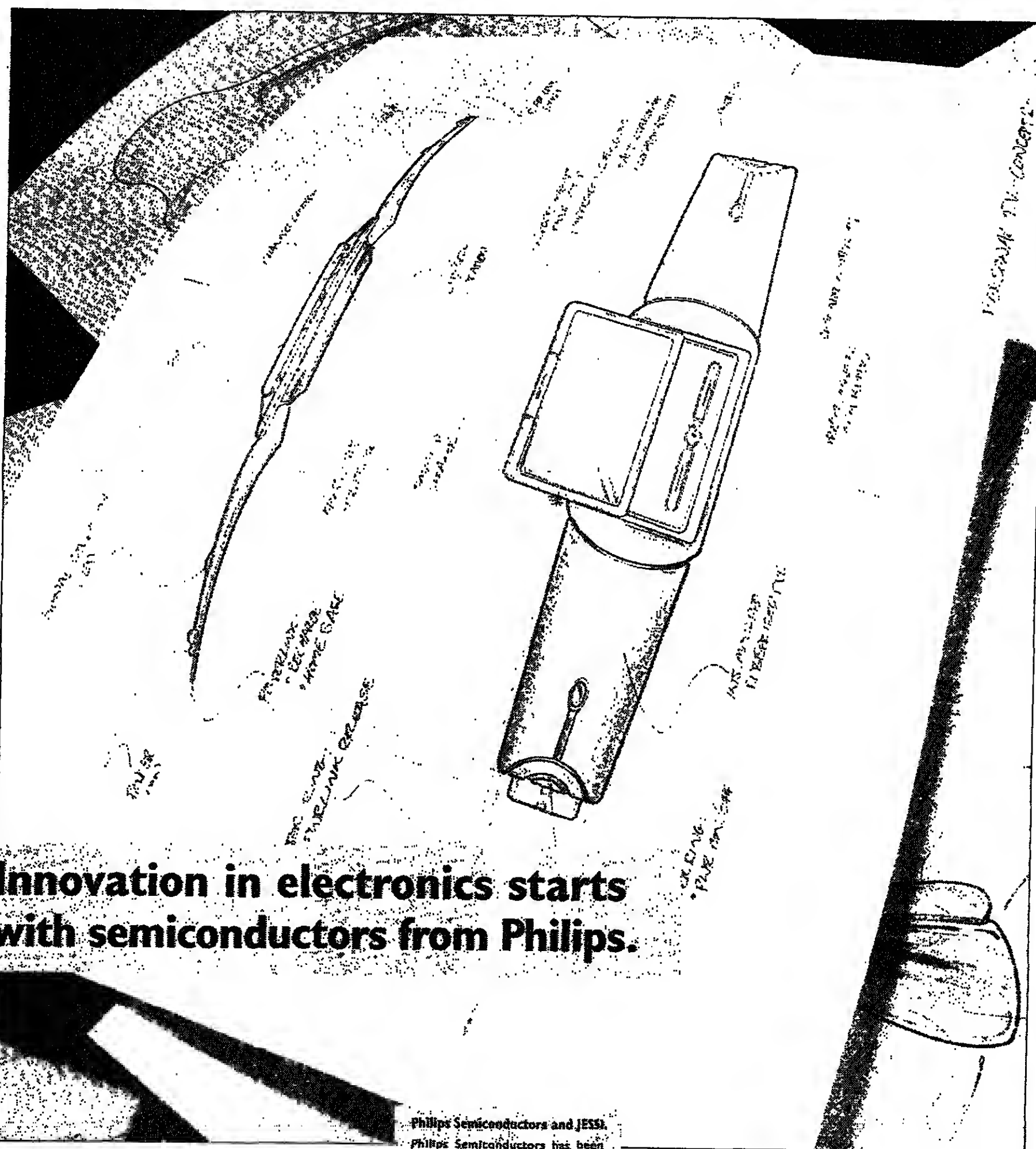
Digital  
TV Receivers

The European Telecommunications Standards Institute (ETSI) has established a common standard for digital television broadcasting throughout Europe. Beginning in 1996, it will increase competition between cable, satellite and terrestrial television services.

Over 110 organizations are supporting the European Launching Group — Digital Video Broadcasting, which has as its task the defining of specifications for the transmission of digital services via satellite, cable and terrestrial links.

The project's role is complex but vital. On one side, it is helping the key players to translate a standard into precise component specifications for transmission and reception. On the other, it helps feed information back into the standardization process. Most important for the viewer, it is enabling Europe's companies to realize economies of scale in the development of a new television generation.

The partners in the JESSI Digital Television Receiver project are developing a set of integrated circuits and other components for consumer receivers of digital audio and video transmissions. S.B.

Innovation in electronics starts  
with semiconductors from Philips.

Fast-growing markets demand innovative products. Innovative products need sophisticated semiconductors.

Which is why Philips Semiconductors is continuing its drive to create advanced submicron devices and chipsets for the coming generations of products in the multimedia, wireless personal

communication, and consumer markets.

As Europe's leading indigenous semiconductor supplier, we have strong design and manufacturing resources serving these markets. In addition, we're proud to be working with JESSI, sharing their vision and commitment. Together we will push the boundaries of microelectronics even further.

Philips Semiconductors and JESSI. Philips Semiconductors has been involved with JESSI from its inception. Major examples of our involvement in the Technology Subprogram are:

- T20 Joint Logic — Submicron CMOS.
- T22 Embedded Memory — SRAM, DRAM, NVM options for CMOS.
- T24 TIBIA — (Technology Initiative for BiCMOS in Application) — Submicron BiCMOS.
- T30 MST (Manufacturing Science and Technology) — Low cost manufacturing.

Philips  
Semiconductors



PHILIPS

Common  
Framework

The JESSI Common Framework project cuts across national and industry divides to provide Europe's systems houses and chip makers with a common platform for computer-aided engineering applications.

Like JESSI itself, the common framework enables several partners to attack the same problem simultaneously. By using this approach, known as concurrent engineering, they can reduce the overall development costs of a product and get it on to the market faster.

"It's unique," says Anton Sauer, who has been involved with the project since its inception. "With JCF, JESSI is integrating all the various steps toward integrated chip production based on European standards."

Over 100 people from 17 companies in seven European countries contributed to the software's first release in July 1993. Beyond use in an engineering environment (such as board layouts, chip design and circuit measurement), the platform also offers considerable potential for further application in maintenance, sales and other information management environments. S.B.



## M I C R O E L E C T R O N I C S



Digital audio broadcasting, which may replace FM in the car radios of the future, is given a mobile test.

EXPERIENCE POINTS THE WAY  
TO NEXT INTERNATIONAL STEP

Moving from market-defining projects to market-furthering cooperation.

In the early days of integrated circuits during the 1960s, one factor reduced the complexity of microelectronics research: It was all primarily focused on one set of purchasers, the world's computer manufacturers. Now this factor is gone.

Worldwide, only 40 percent of all microelectronic components currently go into personal computers and mainframes. Telecommunications, industrial systems and consumer electronics have become microelectronics markets of comparable magnitude.

## Increasing intricacy

One factor all these divergent markets have in common is that they are continually generating products of increasing individuality and intricacy.

The upshot of this proliferation of areas of application is that developing all of them is no longer feasible from a scientific point of view, nor desirable in terms of costs and benefits.

A preselection of microelectronic research topics is necessary and is best left to the companies that will purchase them.

At least, that is the operating procedure chosen by a group of European executives, research officials and governmental representatives engaged in roundtable discussions.

Their subject is the future of the semiconductor industry and how the Continent can best prepare itself for it. Their ranks include a large contingent of industrial chip consumers.

## Similar structure

This is not the first time such a roundtable has been convened. Eight years ago, similar deliberations led to the founding of JESSI.

In fact, the organization emerging from these deliberations — given the working name MEDEA — will probably share one key feature with its predecessor: its structure.

"JESSI's method of using projects and clusters to vertically and horizontally integrate Europe's variegated microelectronics industry has proven its merits," says Heinz Hagmeister, the program's chairman. "It would be ill-advised not to capitalize upon this successful experience and the wealth of

working relationships it has engendered."

According to Mr. Hagmeister, the creation of a market-driven organization would represent building on the past's accomplishments rather than a radical break with it.

## Market-oriented

"JESSI has always had a strong applications, market-oriented component," he says. "This orientation has been getting stronger over the past few years as the growing number of application-related projects shows. And, as no one ever designs and produces a chip without having a potential customer in mind, chip-manufacturing has always been market-driven."

The scenario emerging from the roundtable is that JESSI's completion, scheduled for Dec. 31, 1996, will be smoothly and immediately followed by the start-up of the new organization.

"A transition from JESSI and its market-defining projects to MEDEA and its market-furthering ones" is how Mr. Hagmeister describes it.

T.S.

Digital Audio  
Broadcasting

Until recently, FM radio has been fighting a losing battle with the CD player. For sheer listening pleasure, especially in a moving vehicle, the CD player's digital audio sound quality used to be far superior. Now it has met its match.

Digital Audio Broadcasting is the digital successor to Europe's 40-year-old FM radio network. Within the next 15 years, industry pundits predict, it could replace analog FM entirely.

The new digital technology not only boosts audio sound quality for listeners, but also enables more stations to be crammed into the same bandwidth and opens up intriguing new possibilities for broadcasters. With a little added data, for example, the radio could be persuaded to visually display song titles, news flashes or short messages.

DAB will be taking to the airwaves in 1995. JESSI, which has been involved in the project since 1990, will be delivering first-generation chip sets for large-scale field trials of the system at the end of this year. A second generation for mass production is scheduled to follow.

S.B.

LONG-TERM IDEAS  
PUT INTO FOCUS

Program combines Europe's research skills.

The link between advanced technology and the quality and quantity of basic research is nowhere more spectacularly demonstrated than in the semiconductor industry.

"Innovation lies at the heart of the semiconductor industry," says Professor R.A. Lawes of the Rutherford Appleton Laboratory in Oxfordshire, England, who is chairman of the JESSI Subprogram Board on Basic and Long-Term Research. "In Europe, these innovative skills are present in both industry and academia, particularly in the large national research centers such as IMEC in Belgium, LETI and CNET in France, the Fraunhofer Institutes in Germany and DIMES in the Netherlands. It's important to JESSI — and hence to the European semiconductor industry as a whole — that these human and technological resources are focused on problems relevant to the future competitiveness of the European industry."

The JESSI Basic and Long-term Research Subprogram was set up to provide the multidisciplinary R&D framework necessary to pave the way for future CMOS logic process generations. The project consortium combines the skills and expertise of the leading European R&D centers with the market and product awareness of the Continent's major IC manufacturers (Philips, SGS-Thomson and Siemens).

"The real strength of JESSI for basic and long-term research," says Mr. Lawes, "is that it provides a focus for ideas originating in academia and a management structure whereby the best ideas can be chosen for investigation, evaluation and funding."

According to Mr. Lawes, the major challenge facing the basic and long-term research community is how to manufacture semiconductor devices with dimensions of less than 0.15 microns. He cites the field of optical lithography as a case in point. "At dimensions of less than 0.2 microns," Mr. Lawes explains, "conventional optical lithography reaches its limits due to the basic laws of physics. A technological revolution — instead of an evolution — may then be necessary to take the next step. This is just one example of how basic and long-term research today is essential to maintaining and increasing Europe's market share tomorrow."

J.G.

## ADVANCED CHIPS

Continued from page 13

an apologetic aside, if at all. Then came a renewed commitment to research and development by Siemens, Philips, Daimler-Benz, Matsushita, SGS-Thomson and Europe's other manufacturers of semiconductor components, all of whose microelectronic-related R&D expenditures reached new highs in the late '80s.

## JESSI's role

JESSI played an important role in this rapprochement between chip and industrial manufacturers, particularly with its "applications" subprogram, according to Guy Dumas, the program's vice chairman of the board. "In this sub-program's projects, some of the Continent's largest industrial manufacturers — including Daimler-Benz, Alcatel and GEC — have been articulating their needs and wishes, and microelectronics manu-

facturers have been responding."

The impact of microelectronics has not been restricted to boosting Europe's existing industries. Chip-based and -related technologies have been creating such spin-off sectors as "tele-maintenance" and "biosensors."

## Long-distance repairs

Both these spin-offs have been developed and marketed by young European companies, and both feature an "implanted chip" linked on-line to a central computing unit.

In the first case, the chip is placed in a machine tool or production line and monitors facility performance, "calling" for long-distance repair services when needed. Biosensors are embedded in lakes and marshlands or even in human tissue and use "bioreactors" to report on levels of industrial contaminants. Terry Swartzberg

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## SPONSORED SECTION

## M I C R O E L E C T R O N I C S

## THE EUROPEAN DIMENSION

Many roots sustain what has become a big tree.

If JESSI were a chip, it would be a hybrid.

"It is a typical Eureka project in terms of its top-down element. In other words, it is completely atypical," says Reinhard Loosch of the European Union's Eureka secretariat.

"The European Union deserves the credit for our broad outlook, but the Dutch, German and French governments merit thanks for having supported us from the start," says JESSI Vice Chairman Guy Dumas. "The result may be a strange animal politically speaking, but it is European, with ready access for widespread cooperation with other national research institutes and smaller businesses."

"It's a big tree with many roots," says Charles Henri Domine, a senior civil servant who has been involved in JESSI's development since the start in 1988. "One key was the German government's recognition that it had become impossible for a single country to adequately fund all microelectronics research alone. The European Commission played a key part by responding positively when approached for funding - but only on condition that a framework for cooperation was established within the industry."

JESSI was described as "an important step toward securing the availability of world competitive microelectronics for the European industry" by the IX Conference of European ministers in Hague in June 1991, citing the timely set-up of the organization and the realization of technical milestones. "A Europe of men, not institutions," says Charles Henri Domine, capturing the essence of JESSI.

Developed as an ad hoc arrangement and confirmed by a simple exchange of ministerial letters in 1988, JESSI is all about Europeans working together. From the beginning, industry and public authorities have worked closely in parallel, with each side mirroring the other's two-tier structure for dealing with executive and operational issues.

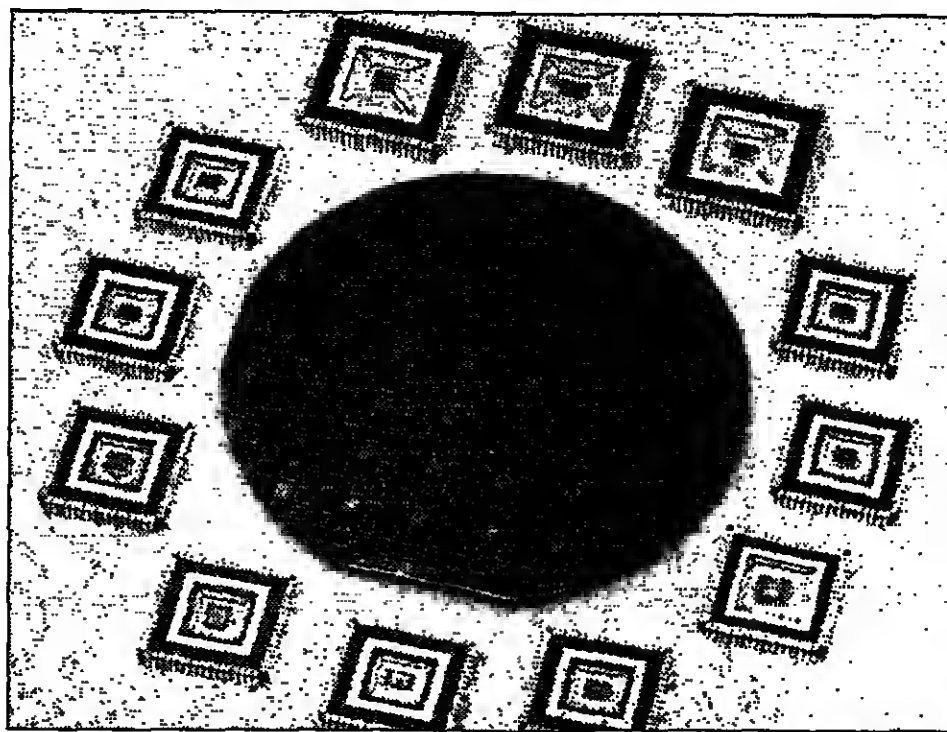
The civil servants and technocrats brought the cold eye of reason to bear and helped check the deadly race for development at any cost that was bleeding the European industry's key players white. At the same time, through common goals and common projects, they helped impose a common basis for longer-term national planning within the EU's four-year frameworks.

The industry brought a

shareholder-driven approach to getting results, global market experience and a commitment to developing the type of alliances and strategic relationships needed, sector by sector.

None of this would have been attainable without a degree of government funding and, above all, central coordination. How else could an industry coordinate the efforts of more than 2,500 scientists and engineers at work in 14 countries? In retrospect, some insiders argue that dialogue not only compelled the key players to agree on program content, but also was instrumental in sustaining a viable electronic industry in Europe.

S.B.



Twelve designs from one wafer - the Multi Project Wafer Service finds a way of delivering microchips at greatly reduced cost.

## SMI Support Program

Only industry giants can afford to underwrite the enormous costs of leading-edge microtechnology development. Without small and medium-sized industries (SMIs), however, there would be far less industry to lead.

By promoting closer cooperation between the two sides, JESSI's SMI Support Program is securing the future of the European microelectronics sector as a whole. In a bid to spread the potential benefits of microelectronics technology more widely, JESSI has already passed the halfway stage of an ambitious program to establish by 1996 contact with 25,000 European small and medium-sized companies and potential users of JESSI technology.

The initiative, which was launched in 1990, underscores the vital part that Europe's smaller businesses play as both industry suppliers and market innovators. To provide them with direct practical support, JESSI's 10-nation network of Competence Centers offers a full range of design, prototyping, testing, training, feasibility study and other services.

S.B.

## VIEWS FROM THE BOARDROOM

Doug Dunn is chairman and CEO of Philips Semiconductors.

The pace of growth within the electronics industry is still quickening. There are still many fluid, ill-defined potential markets. The task at hand is to define winning products for the future. Since the financial stakes are high, corporations are forming alliances - including transcontinental alliances - to create the best chance of identifying successful new products. But it's the quality and not the quantity of alliances that matters. Alliances are most effective when companies serving different links in the value chain - from basic silicon chips to finished electronic devices - come together to enrich the final product. In any joint venture or

alliance, a balance must be struck between the competitive issues and the ultimate benefits. For the European industry, the benefits of mutual cooperation are great. Given the strength of foreign competition, healthy individual semiconductor manufacturers are not enough. The European industry as a whole has to be healthy in order to stand shoulder to shoulder with Japanese, Korean and American firms. The European industry should therefore concentrate on collectively creating products with added value rather than merely swapping knowledge. It may be time for JESSI to consider more competitive forms of col-

laboration closer to the final product.

Silicon technology is a key enabling technology for all types of industries, from coal mining to automobile manufacturing to shipbuilding. Without access to electronics, many industries would simply grind to a halt. By focusing on submicron silicon technology, JESSI provides an important stepping stone to a healthy European electronics industry. And a healthy European electronics industry means that European industry as a whole will thrive.

J.G.

## ALLIANCES ADD VALUE

Giuseppe Zocchi, director of R&D Technology at SGS Thomson Microelectronics, emphasizes JESSI's importance in producing added value for Europe's chip manufacturers through strategic alliances, often with competitors.

"JESSI has been an important stimulus," says the Italian engineer. "The general requirements of our industry have brought all semiconductor companies closer together than before. We have a clearer idea of each other's objectives. In fact, we have very few secrets from each other."

With product development costs spiraling, chip manufacturers now appreciate the advantages of sharing information, according to Dr. Zocchi.

"An excellent example of how this type of partnership functions is SGS Thomson's partnership with Philips at our own company's facility in Crolles, France, where we are developing process technology for chips with feature widths of 0.5 microns and below," says Dr. Zocchi.

He adds: "That marks a big step forward from the early times of JESSI, when companies were already cooper-

ating, but each at his own facility. Now, working together as we do at Crolles, there is more synergy. France's Centre National des Etudes de Télécommunications is associated with the venture."

The Franco-Italian and Dutch chip manufacturers decided to work together on the same site in order to accelerate the development of new processes.

SGS Thomson and Philips began cooperating at Crolles last year, as soon as 8-inch wafer fabrication was begun. The 0.5 micron process is now being worked on.

J.M.G.

## INDUSTRY BRIEFS

## More cards

Just over 40 million "smart cards" are in circulation today, and the forecast is that well over 300 million will be on sale in Europe in two and a half years. Germany's VDI Nachrichten reports that the prime causes of this boom are the rapid proliferation of mobile telephones, pay-TV stations and "remote" banking transactions (those not carried out on bank premises), plus the Continent-wide introduction of these cards as health care system IDs and mass transit tickets. As the cards' "intelligence" comes from microcontrollers (a form of high-end chip), further expansion of the Continent's microelectronics sector is certain.

Research on the frontier "Nanocircuits" - referring to their tiny nanometric size - have a "bump" and a "plain." The bump means "1" and the plain "0." The bump is exactly one tungsten di-selenide molecule high. The chips to be made out of these circuits will have capacities roughly 1 million times higher than conventional ones.

These circuits were developed by Harald Fuchs and Thomas Schimmel, two German researchers. Although their wide-scale practical use in chips is still at least a generation away, the technology is already being employed to create nanometric yardsticks: calibration devices capable of measuring the dimensions of microsystem devices.

Competition for these nanochips will come from photonics-based systems, which use as their media photons, the components of light. Photons can carry vastly greater amounts of information than electrons and occupy much less space. They are already at work transmitting telephone conversations and streams of data through glass-fiber cables.

**European triumph** Once the power has been turned off, conventional DRAMs (dynamic random access memory) lose information. Not so Flash EPROMs (erasable programmable read-only memories). The ability of these chips to secure data instantaneously has made them the fastest-growing product in the microelectronics sector.

In 1992, according to Dataquest, some \$300 million worth of Flash EPROM chips were sold worldwide. In 1997, the figure is projected to be \$3 billion. SGS-Thomson has become one of the world's three leading manufacturers of Flash EPROMs. Two-thirds of the company's chips are produced in Europe; and more than 50 percent of its production is exported.

## Dutch expansion

Philips Electronics of Eindhoven, the Netherlands announced in August that it will invest some 300 million guilders (\$287 million) in the manufacture of integrated circuits at its facility in Nijmegen, the Netherlands. This will lead to an additional production capacity of more than 10,000 submicron wafers a month, creating about 300 new jobs.



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## IVIS Fraunhofer Research Cluster for Integrated Systems

IVIS (Fraunhofer - Institutsverbund Integrierte Systeme) is a research cluster containing three institutes. We are focused on advanced silicon technology and system integration techniques including ecological aspects of microsystem technologies.

The scope ranges from highly integrated circuits to integration techniques for multifunctional systems - either integrated monolithically or with high performance hybrid techniques in a solid-state device.

IVIS solves this problem by providing a basis for effective labor-sharing. Thus the facility offers a highly competitive capacity for important research tasks. IVIS acts as one unit without being located in one place.

This type of organization gives enough flexibility to allow close cooperation with local industry and to make the facility a strong partner for industry as well as for international research cooperations.

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Electrostatic Micromotor developed at IZM

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# MONDAY SPORTS

## Hill Closes In On Schumacher

The Associated Press

ESTORIL, Portugal — Damon Hill of Britain won the Portuguese Grand Prix on Sunday, heading a Williams-Renault sweep to close to within one point of the suspended Formula One championship leader, Michael Schumacher.

In a textbook race, the blue-and-white cars of Hill and his Scottish teammate David Coulthard headed the field almost constantly from the eighth lap, when the leading Ferrari of Gerhard Berger of Austria rolled to a halt trailing gray smoke.

Hill completed the 71 laps of the 4.36-kilometer (2.72-mile) race in one hour, 41 minutes and 10.165 seconds at an average speed of 183.589 kph. Coulthard was second, just 0.603 seconds behind.

"We had 100 percent reliability from the car," Hill said after celebrating his victory on the podium. "And I'm absolutely delighted with the result. Winning the 10 points gives us a terrific platform to finish off the season."

The triumph gave Hill a total of 75 points in the drivers' championship tables, just one behind Schumacher, who com-

pleted a two-race ban on Sunday for ignoring a black flag earlier this season. The German Benetton-Ford driver, dominant in the first part of this season, is to return, with three races to go, at the Oct. 16 race at Jerez, Spain.

Hill predicted that Schumacher would be "fired up" after his forced absence and said he expected "a real ding-dong" for the rest of the season.

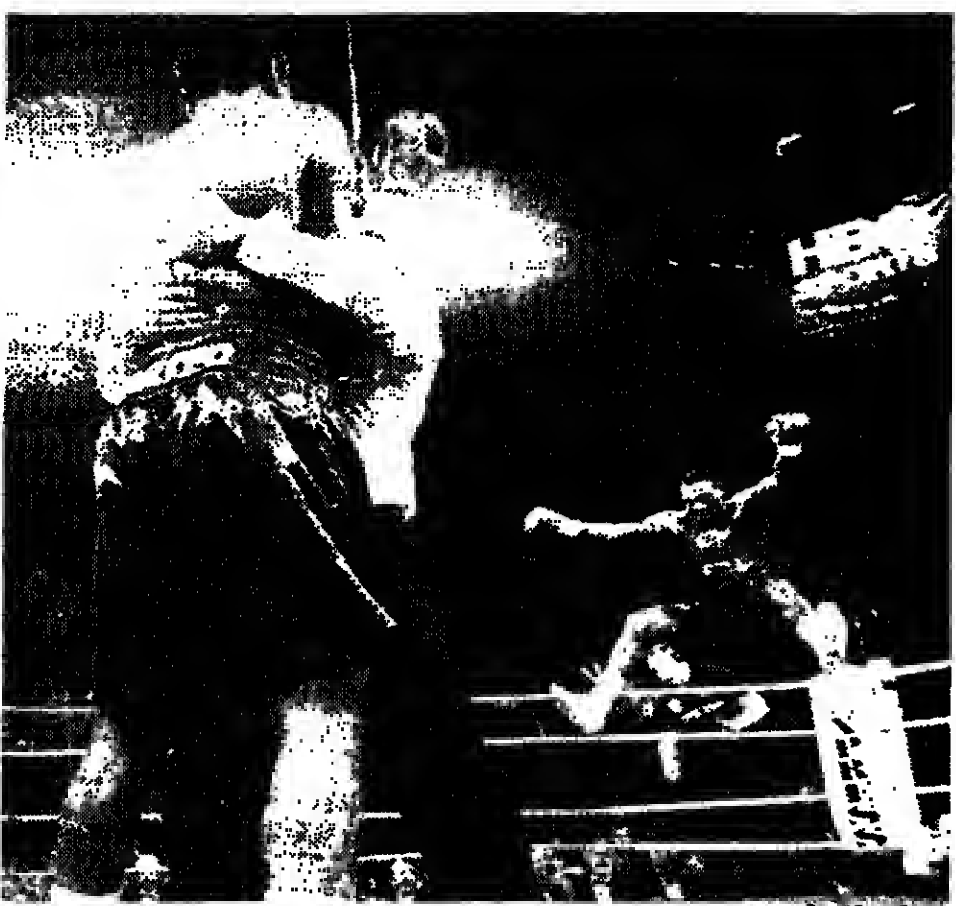
Mika Hakkinen of Finland was third on Sunday in a McLaren-Peugeot, 20.193 seconds behind Hill and 7.8 seconds ahead of the Jordan-Hart of Rubens Barrichello of Brazil.

Jos Verstappen of the Netherlands was fifth in his Benetton-Ford, and Martin Brundle of Britain, in the second McLaren-Peugeot, placed sixth.

The one-two by Hill and Coulthard gave Williams-Renault 16 points for a total of 89 points and the lead in the championship tables, two points ahead of Benetton-Ford.

Race stewards penalized David Brabham of Australia with a one-race ban after a collision with Jean Alesi, Berger's teammate. The ban will be suspended for three races, Brabham's Simtek-Ford team said.

## McCall Snatches Title From Lewis With 2d-Round KO



The referee restrained Lennox Lewis as Oliver McCall celebrated his victory Sunday.

By James F. Clarity

New York Times Service

LONDON — Within 20 minutes of his underdog fighter's stunning knockout victory in a heavyweight championship match early Sunday, Don King was performing, flamboyant in the way that makes him boxing's inebriated presence. He attacked HBO, which had televised the fight in America; he paraphrased Winston S. Churchill and Rudyard Kipling and dashed off a version of "Yankee Doodle Dandy."

For King the new Yankee Doodle Dandy is the winner of the fight, Oliver McCall, whose quick right-hand counterpunch knocked out Lennox Lewis, the World Boxing Council champion, after 31 seconds of the second round at Wembley Arena. McCall, 29, an American mostly known as Mike Tyson's sparring partner, with a previous record of 24-5 against undisputed opponents, was hard pressed at the post-fight news conference to make himself heard over the unrestrained gloating of King.

While no direct charges of unethical or illegal tricks were attributed to King, there were suggestions that he and McCall, if they had not some-

how stolen the fight, had indeed taken something that did not belong to them.

The return of King and a rush of controversy about the fight sprung from McCall's punch to the face of Lewis, who had never lost a fight, nor been knocked down.

The punch knocked Lewis to the seat of his shiny black shorts. His back touched the floor, he rolled over and got up shakily as the referee, José Guadalupe García of Mexico, was counting. Lewis said later he first heard the count when it reached six. By seven he stood up and stepped back uncertainly, wobbling to the side, then toward the referee.

"I was getting my feet straight," he said. "He asked me if I was O. K. I nodded with my head yes. He asked me again, I nodded yes. Then he waved off the fight. It was an awfully fast count. I was totally robbed."

"I think as heavyweight champion I should have been allowed to continue," he said.

García raised 10 fingers in Lewis's face, then blocked him from moving toward McCall, and wrapped his arms around the defeated champion.

"I am absolutely sure of what I did," the referee said.

"Lennox Lewis was knocked out, gone. To allow more punches to Lennox Lewis could have had fatal consequences. It is my duty to protect the health of the boxer."

But boxing experts noted immediately that García comes from Mexico City, where the WBC is based, and its president, José Sulaimán, is known to be friendly to King. Lewis camp officials said the WBC had at first wanted to name two Mexican officials to the fight, but that British officials reduced the number to one.

At the news conference, Frank Delaney, Lewis's manager, was clearly angry as he announced that he would protest the result on grounds that a fast count was delivered by a referee who had never before worked a heavyweight championship.

But Sulaimán said, "Lennox Lewis was very hurt." He said the referee had handled 12 championship fights, but none heavyweight. "He is one of the best in Latin America," Sulaimán said. He added that the WBC would consider the protest at its meeting in Spain next month, and had the power to order a rematch, but said that this seemed unlikely.

## SCOREBOARD

### Top 25 College Results

How the top 25 teams in the Associated Press college football poll fared this week:

1. Florida (2-0) did not play. Next: at Mississippi State, Saturday, 4:30 p.m. (ET/PT).  
 2. Miami (2-1) did not play. Next: at Wake Forest, Saturday, 4:30 p.m. (ET/PT).  
 3. Florida State (4-0) did not play. Next: at North Carolina, Saturday, 4:30 p.m. (ET/PT).  
 4. Miami (2-1) did not play. Next: at Wake Forest, Saturday, 4:30 p.m. (ET/PT).  
 5. Miami (2-1) did not play. Next: at Wake Forest, Saturday, 4:30 p.m. (ET/PT).  
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 9. Miami (2-1) did not play. Next: at Wake Forest, Saturday, 4:30 p.m. (ET/PT).  
 10. Miami (2-1) did not play. Next: at Wake Forest, Saturday, 4:30 p.m. (ET/PT).  
 11. Alabama (4-0) did not play. Next: at Tennessee, Saturday, 4:30 p.m. (ET/PT).  
 12. Tennessee (3-0) did not play. Next: at Alabama, Saturday, 4:30 p.m. (ET/PT).  
 13. Tennessee (3-0) did not play. Next: at Alabama, Saturday, 4:30 p.m. (ET/PT).  
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 24. Tennessee (3-0) did not play. Next: at Alabama, Saturday, 4:30 p.m. (ET/PT).  
 25. Tennessee (3-0) did not play. Next: at Alabama, Saturday, 4:30 p.m. (ET/PT).

### Other Major College Scores

Other Major College Scores

### CFL Standings

CFL Standings

CFL Standings

### Portuguese Grand Prix

Portuguese Grand Prix

### Japanese Leagues

Japanese Leagues

### W. Michigan 19, Akron 6

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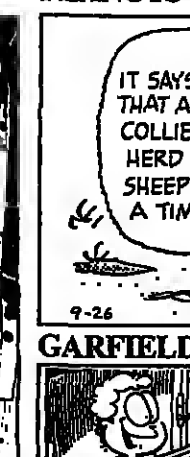
### W. Michigan 19, Akron 6

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### DENNIS THE MENACE



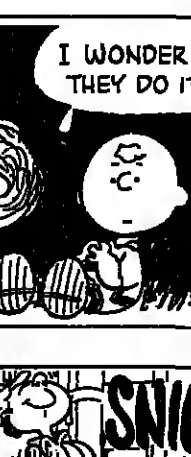
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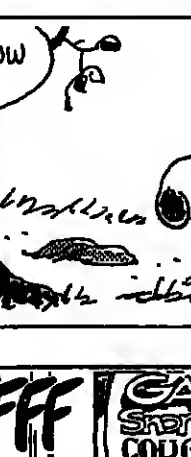
### CALVIN AND HOBBS



### WIZARD of ID



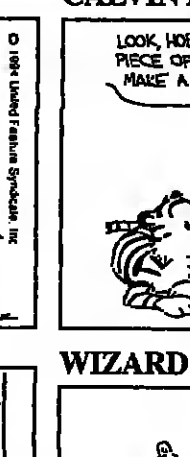
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### BLONDIE



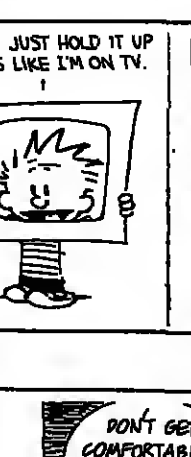
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### TO OUR READERS IN FRANCE



### TO OUR READERS IN FRANCE



### TO OUR READERS IN FRANCE



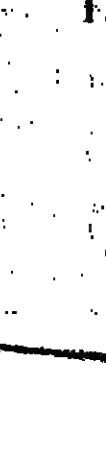
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### TO OUR READERS IN FRANCE









## LANGUAGE

## The Clank of Falsity and of Marley

By William Safire

WASHINGTON — In a political harangue far from the nonpartisan confines of this space, I disparaged some action of the First Lady with this metaphor: "The *clank* of falsity goes to the top."

This criticism elicited a spirited response, which I enjoyed reading, from the Clintons' private attorney, David Kendall of Williams & Connolly. Then, a few days later, in an interview with The Wall Street Journal, Kendall denied another accusation from another source, charging it had "the unmistakable and clanging ring of falsity."

A *clank* is not a *clank*. Kendall, said to charge clients \$400 an hour, is meticulous in his choice of words. I called him, quickly dispensed with the nonsensical matters covered in his response to me as the horrendous Mr. Hyde, then assumed my natural Dr. Jekyll identity: Why did he change the *k* in *clank* to the *g* of *clang*?

"I had in mind a counterfeit coin," Kendall said. "In my aural sense, gongs and cymbals *clang*, while chains — the ghost of Marley comes to mind — *clank*. To me, the false ring of a fake coin is a *clank*."

His carefully considered change of my *clank* deserves examination.

*Clang* is rooted in the Latin *clangere*, "to resound," and was used in ancient times to describe the reverberating sound of a trumpet. Some etymologists think it is akin to the Greek *klazein*, "to scream or bark," and the Old English *klehhan*, "to laugh." In modern English, the verb made its debut in 1576 in "A Popple of Epistles" by Abraham Fleming: "By the clanging trump of swift report, proclaimed." It became a noun 20 years later, defined as "a loud ringing metallic sound" with a second sense of "a harsh cry of a bird (as a crane or goose)."

Contrariwise, *clank* can claim no proud Latin lineage. First sighted in 1656 (when the poet Abraham Cowley wrote, "No *clank* of Chains was known"), it is probably imitative in origin, like the onomatopoeic *zap* or the echotic *hiss*. An Oxford English Dictionary lexicographer anticipated the contempt I would have with Kendall, defining *clank* in contradistinction to *clang*. According to the O.E.D., *clank* is "a sharp, abrupt sound, as of heavy pieces of metal (e.g., links of a heavy chain) struck together; differing from *clang* in ending abruptly with the effect of a knock."

Kendall's reference to Jacob Marley, who wears chains in his ghostly visit to Ebenezer Scrooge in "A Christmas Carol" by Charles Dickens, is therefore correct: those chains *clanked*. The O.E.D. also suggests that *clank* is the offspring of *clang* crossed with *clink*, "to express a sound intermediate to the two, which

has the quality of a 'clank,' but is abruptly shortened like a 'clink.'"

However, the sound of a counterfeit coin's being tested by being dropped on a hard surface would not be the pure, bell-like ring of silver or gold, but would be brief and off-key — closer to *clink* than *clang*. Therefore, in using a metaphor of a metal with a false or discordant ring, I prefer *clank* — the *clank* of falsity.

"O. J. was so graceful, so ingratiating," Robert Lipsyte wrote in The New York Times this summer, "that it was easy to forget how he got there, a ghetto gang leader, a high school, junior college, major college *Alpha male* who had learned to knock down anything in his way."

Gary Muldoon writes from Rochester: "Alpha? The reference is unclear to me. First thought — fraternity — nah. In 'Brave New World,' there are different strata of people, with the Alphas on top — could he?"

Nah. The fairly frequent phrase *Alpha male* — 135 uses in Nexis, 134 in Dialog — though not in dictionaries yet, nor even in The Barnhart New-Worlds Concordance, is from etymology.

No, not *etymology*, the branch of anthropology that compares cultures; *ethology*, the study of animal behavior. In two words, an *Alpha male* is "top dog"; to ethologists, it is "the dog at the top of a troop's dominance hierarchy."

"An *Alpha male*," says Dr. Katherine Houpt, director of the Animal Behavior Clinic at Cornell University, a high human among ethologists, "is the top rank in the hierarchy. From *Alpha* as the first letter in the Greek alphabet, this term is usually used of the top male in wolf packs, the one that gets to breed and to aggress and has first access to scarce resources like food and the best place to sleep."

*Alpha male* is the second contribution of etymology to pop psychology and politics. The first was

pecking order, a discovery of the Norwegian zoologist Thorleif Schjelderup-Ebbe, who called it *hackordning*, "peck order." In the social order of chickens, the one at the top is the hen that pecks but is never pecked in return.

I was the owner, though not the master, of a wonderful Bernese mountain dog named James who was an *Alpha male*. Had he been a chicken, he would have been at the head of the pecking order, but he was no chicken. The trainer said James had "great character," which meant he resisted being told what to do. We finally taught him to sit. How does an *Alpha male* respond to the "sit" command? He waits for you to say it the third time, then sits in the most begrudging way, but to show he's not being submissive, harks, as if to say, "I'm sitting only because I feel like it."

New York Times Service

## Chasing Zero: The History of Numbers

By Barry James

International Herald Tribune

PARIS — In the course of its history, mankind has come up with some bizarre ways of calculating, but until now no one had counted the ways.

Enter Georges Ifrah, whose monumental "Universal History of Figures" fills the gap by describing counting methods and numerology all the way back to Cro-Magnon man.

The more than 2,000-page, two-volume encyclopedia is a publishing sensation in France. At 298 francs (\$56) it has sold 120,000 copies in less than four months and has been high on the best-seller list for several weeks.

Ifrah caught the nation's imagination when he appeared on a television show and held up a school report card that gave him a zero in mathematics.

This touched a nerve among the Cartesian French, who have a love-hate relationship with math. On the one hand, they are told that it is the royal road to success. On the other hand, Ifrah said, they are turned off by the unimaginative way it is taught.

Ifrah, who exudes passionate enthusiasm for his subject, makes math sound like fun. His book, which is in the grand tradition of 18th-century encyclopedists, amazes and fascinates by the scope of its scholarship. It is no less than the story of humanity, told through figures.

Ifrah repaired his early deficiency in math after a friend showed him some of the tricks that one can play with figures. He went on to become a high school teacher of math and wrote three conventional textbooks.

Then, 20 years ago, a pupil asked him how was it possible to calculate using Roman numerals and whence came the zero.

"I was incapable of replying, and shattered by my own ignorance," he said.

Since he could find no book that dealt with the subject, Ifrah decided he would write it. He gave up his job and emigrated to Las Vegas, Nevada, in 1974, where he worked as a taxi driver, waiter and night clerk to finance his search.

With his earnings, plus \$10,000 he won on the slot machines, he traveled



Georges Ifrah tells of counting, all the way back to Cro-Magnon man.

from Mayan pyramids in central America to Inca ruins in Peru and Hindu temples in India. He pored over books in dozens of libraries. He sought the help of anthropologists, historians, archaeologists, ethnologists, mathematicians and people of many other disciplines.

The result was the first edition of "Universal History of Figures," which appeared in 1981. sold a respectable 50,000 copies and was translated into 14 languages. But it was not the book he wanted to write, which was the story of human intelligence across civilizations.

So, financing himself through savings and supported by a wife who believed in him, Ifrah again set off around the world in search of the material that he has poured into the new book. The only thing it shares with the first edition is the title. It contains hundreds of illustrations

drawn by Ifrah. He said he did poorly in art at school as well.

Zero was the Holy Grail. When, why and how did men first use it? The ancient Chinese used black and white sticks to stand for negative and positive numbers, but could not conceive of zero. The Babylonians pondered the problem, but never found the answer. "Twenty minus twenty," a scribe scratched on a clay tablet. "You'll see."

Ifrah believes zero was discovered by Indian mystics seeking to notate the age of Brahma and the extent of the universe. They needed to manipulate very large figures, since Brahma was thought to be three trillion years old. The Indians also had highly developed abstract notions of infinity and nonsubstantiality.

The first known use of zero in a modern text, Ifrah discovered, was in an Indian text describing the position

of the planets and stars, which enables it to be precisely dated to Aug. 25, 458 on the Julian calendar.

"It was necessary to have a civilization that was familiar with the void in all its aspects to turn nothingness into a number," Ifrah said. "The zero is one of the most brilliant manifestations of human intelligence, almost as important as the discovery of fire."

Zero opened the way to algebra and modern calculus. It freed men from the need to count on their fingers or toes, or with wooden tallies, knotted strings and piles of pebbles.

The Arabs quickly adopted Indian notation, but it took a thousand years for it to be adopted in Europe. Gerbert d'Aurillac, who became Pope Sylvester II, brought Arab notation back from Spain in the 10th century. He thereby gained a reputation as a sorcerer and alchemist. In 1643, the Vatican opened up his tomb to make sure no devils were hiding inside.

The priests were not only suspicious of non-Christian symbols, but were also eager to keep their monopoly on knowledge of counting. As Ifrah discovered, it is impossible to calculate using Roman numerals. The clerics kept accounts by shuffling pieces on a checker board, which is why the British minister of finance is still known as the Chancellor of the Exchequer. It was not until the wave of learning known as the Renaissance that Indian-Arab notation entered Europe.

Calculate, incidentally, comes from the Latin for "stone," recalling the piles of pebbles that people used to count.

Ifrah says he was fortunate to grow up at the crossroads of three civilizations in Marrakech, Morocco. From his Jewish family, he knew about the cabala, the ancient system of mystic numerology. He was aware of the vital contribution of the Arabs to scientific and mathematical culture. And his studies in French introduced him to the inquiring minds of the Enlightenment.

Working on the book has made him a profound humanist. Man has the same natural counting ability as a crow. "What sets us apart," Ifrah said, "is the culture which we transmit from generation to generation. We all possess the same potential for intelligence."

## WEATHER

## Europe

	Today	High	Low	Temp	Wind	W
Algeria	21/10	16/01	10/01	20/72	17/62	pc
Amsterdam	18/01	13/05	08/01	17/62	12/53	pc
Athens	20/72	11/52	06/48	24/76	12/53	a
Berlin	20/72	11/52	06/48	24/76	12/53	a
Bombay	29/82	17/62	12/53	29/82	17/62	a
Buenos Aires	21/70	13/05	08/01	17/62	12/53	pc
Calcutta	18/01	13/05	08/01	17/62	12/53	pc
Cairo	21/70	13/05	08/01	17/62	12/53	pc
Chennai	29/82	17/62	12/53	29/82	17/62	a
Columbus	21/70	13/05	08/01	17/62	12/53	pc
Dakar	21/70	13/05	08/01	17/62	12/53	pc
Dhaka	29/82	17/62	12/53	29/82	17/62	a
Delhi	29/82	17/62	12/53	29/82	17/62	a
Dubai	29/82	17/62	12/53	29/82	17/62	a
Hong Kong	29/82	17/62	12/53	29/82	17/62	a
London	15/59	04/48	01/44	18/64	04/48	pc
Madrid	21/70	13/05	08/01	17/62	12/53	pc
Mumbai	29/82	17/62	12/53	29/82	17/62	a
New Delhi	29/82	17/62	12/53	29/82	17/62	a
Paris	21/70	13/05	08/01	17/62	12/53	pc
Rangoon	29/82	17/62	12/53	29/82	17/62	a
Riyadh	29/82	17/62	12/53	29/82	17/62	a
Singapore	29/82	17/62	12/53	29/82	17/62	a
Taipei	29/82	17/62	12/53	29/82	17/62	a
Tokyo	29/82	17/62	12/53	29/82	17/62	a
Yokohama	29/82	17/62	12/53	29/82	17/62	a

## Forecast for Tuesday through Thursday, as provided by Accu-Weather.

	Today	High	Low	Temp	Wind	W
Algeria	21/70	16/01	10/01	20/72	17/62	pc
Amsterdam	18/01	13/05	08/01	17/62	12/53	pc
Athens	20/72	11/52	06/48	24/76	12/53	a
Berlin	20/72	11/52	06/48	24/76	12/53	a
Bombay	29/82	17/62	12/53	29/82	17/62	a
Buenos Aires	21/70	13/05	08/01	17/62	12/53	pc
Calcutta	18/01	13/05	08/01	17/62	12/53	pc
Cairo	21/70	13/05	08/01	17/62	12/53	pc
Chennai	29/82	17/62	12/53	29/82	17/62	a
Columbus	21/70	13/05	08/01	17/62	12/53	pc
Dakar	21/70	13/05	08/01	17/62	12/53	pc
Dhaka	29/82	17/62	12/53	29/82	17/62	a
Delhi	29/82	17/62	12/53	29/82	17/62	a
Dubai	29/82	17/62	12/53	29/82	17/62	a
Hong Kong	29/82	17/62	12/53	29/82	17/62	a
London	15/59	04/48	01/44	18/64	04/48	pc
Madrid	21/70	13/05	08/01	17/62	12/53	pc
Mumbai	29/82	17/62	12/53	29/82	17/62	a
New Delhi	29/82	17/62	12/53	29/82	17/62	a
Paris	21/70	13/05	08/01	17/62	12/53	pc
Rangoon	29/82	17/62	12/53	29/82	17/62	a
Riyadh	29/82	17/62	12/53	29/82	17/62	a
Singapore	29/82	17/62	12/53	29/82	17/62	a
Taipei	29/82	17/62	12/53	29/82	17/62	a
Tokyo	29/82	17/62	12/53	29/82	17/62	a
Yokohama	29/82	17/62	12/53	29/82	17/62	a

## Asia

	Today	High	Low	Temp	Wind	W
Algeria	21/70	16/01	10/01	20/72	17/62	pc
Amsterdam	18/01	13/05	08/01	17/62	12/53	pc
Athens	20/72	11/52	06/48	24/76	12/53	a
Berlin	20/72	11/52	06/48	24/76	12/53	a
Bombay	29/82	17/62	12/53	29/82	17/62	a
Buenos Aires	21/70	13/05	08/01	17/62	12/53	pc
Calcutta	18/01	13/05	08/01	17/62	12/53	pc
Cairo	21/70	13/05	08/01	17/62	12/53	pc
Chennai	29/82	17/62	12/53	29/82	17/62	a
Columbus	21/70	13/05	08/01	17/62	12/53	pc
Dakar	21/70	13/05	08/01	17/62	12/53	pc
Dhaka	29/82	17/62	12/53	29/82	17/62	a
Delhi	29/82	17/62	12/53	29/82	17/62	a
Dubai	29/82	17/62	12/53	29/82	17/62	a
Hong Kong	29/82	17/62	12/53	29/82	17/62	a
London	15/59	04/48	01/44	18/64	04/48	pc
Madrid	21/70	13/05	08/01	17/62	12/53	pc
Mumbai	29/82	17/62	12/53	29/82	17/62	a
New Delhi	29/82	17/62	12/53	29/82	17/62	a
Paris	21/70	13/05	08/01	17/62	12/53	pc
Rangoon	29/82	17/62	12/53	29/82	17/62	a
Riyadh	29/82	17/62	12/53	29/82	17/62	a
Singapore	29/82	17/62	12/53	29/82	17/62	a
Taipei	29/82	17/62	12/53	29/82	17/62	a
Tokyo	29/82	17/62	12/53	29/82	17/62	a
Yokohama	29/82	17/62	12/53	29/82	17/62	a

## Africa

	Today	High	Low	Temp	Wind	W
Algeria	21/70	16/01	10/01	20/72	17/62	pc
Amsterdam	18/01	13/05	08/01	17/62	12/53	pc
Athens	20/72	11/52	06/48	24/76	12/53	a
Berlin	20/72	11/52	06/48	24/76	12/53	a
Bombay	29/82	17/62	12/53	29/82	17/62	a
Buenos Aires	21/70	13/05	08/01	17/62	12/53	pc
Calcutta	18/01	13/05	08/01	17/62	12/53	pc
Cairo	21/70	13/05	08/01	17/62	12/53	pc
Chennai	29/82	17/62	12/53	29/82	17/62	a
Columbus	21/70	13/05	08/01	17/62	12/53	pc
Dakar	21/70	13/05	08/01	17/62	12/53	pc
Dhaka	29/82	17/62	12/53	29/82	17/62	a
Delhi	29/82	17/62	12/53	29/82	17/62	a
Dubai	29/82	17/62	12/53	29/82	17/62	a
Hong Kong	29/82	17/62	12/53	29/82	17/62	a
London	15/59	04/48	01/44	18/64	04/48	pc
Madrid	21/70	13/05	08/01	17/62	12/53	pc
Mumbai	29/82	17/62	12/53	29/82	17/62	a
New Delhi	29/82	17/62	12/53	29/82	17/62	a
Paris	21/70	13/05	08/01	17/62	12/53	pc
Rangoon	29/82	17/62	12/53	29/82	17/62	a
Riyadh	29/82	17/62	12/53	29/82	17/62	a
Singapore	29/82	17/62	12/53	29/82	17/62	a
Taipei	29/82	17/62	12/53	29/82	17/62	a
Tokyo	29/82	17/62	12/53	29/82	17/62	a
Yokohama	29/82	17/62	12/53	29/82	17/62	a

## The Plaza: A Glittering New Life to Match the Old One